The OIL and GAS JOURNAL

PRODUCING REFINING MARKETING

VOL. 23. NO. 44 TULSA, OKLAHOMA, MARCH 26, 1925

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TABLE OF CONTENTS

SPECIAL ARTICLES

Big Mexican Well Attracts Attention 19
By Andrew M. Rowley
South Liberty and Hull Pools boost Texas production. Oklahoma shows another material decline.

American Companies United in Irak 21
By L. M. Fanning
Backed by State Department they have secured 30 per cent interest in Turkish Petroleum Concession.

Federal Trade Commission Barred From "Fishing" 21

Directors of A. P. Institute to Meet 22
By L. M. Fanning
Will hear report of Committees on Conservation Questionnaire. Rate Investigation and Tank Spacing.

Oil Business Centers on Refiner 23
By N. O. Fanning
Condition of industry depends upon his making a profit. Cyclic conditions on prices follows crude buying.

Oil Burner Manufacturers' Opportunity 24
By L. M. Fanning
Chicago convention next month should investigate coal propaganda against oil and take steps to answer it.

World Waits for Motorization (Editorial) 26

The Producer's Opportunity in 1925 28
Situation most promising in several years, result of slow and cumulative changes.

Cooperation in Foreign Fields 132
By L. M. Fanning

Kansas Only Mid-Continent Field to Show Increase 155

North Central Texas Production May Exceed 1924 156
By George R. Kelley

Oil Securities Share General Selling 162
By N. O. Fanning

Elements in Natural Gasoline Equipment (Illustrated) 165
By Frank P. Peterson
Change and revision predicted in absorption recovery. Central power plant arrangement and construction.

Wax Sweating Temperature Control 172
By W. C. Begeebing
Automatic equipment increases production and quality of product. Reduced steam consumption and labor costs.

A. O. M. A. Convention for Expansion 173
President A. J. Callaghan and Secretary H. G. James reelected. Dr. Alderson talks on shale oil and W. F. Davis on prices.

OIL AND AVIATION

Gravure Section 73-104

Record Breaking Voyages Through Air 65
By Charles E. Kern
Famous flights by American Aviators and aeronauts made possible by products of the oil industry.

More and Better Flying Each Year in United States 65
By L. M. Fanning

Air Mail Service Becomes Necessity (Map) 105
By Charles E. Kern
Does not pay expenses but development expected to be rapid and extensive within few years.

Supplying Oil for Flight Around the World 126

FIELD OPERATIONS

Late Fields 30

North Texas 31-32
By George R. Kelley

Gulf Coast 34
By P. L. McGreal

Oklahoma 38
By C. D. Lockwood

Kansas 40
By C. D. Lockwood

California 42
By L. P. Stockman

Mexico 43
By George Blardone

Rocky Mountain Area 44
By F. B. Taylor

Canada 44
By Victor Lauriston

North Louisiana-Arkansas 46
By M. L. Vaughn

East Central Texas 48

Pennsylvania-West Virginia 52
By D. S. Wakenight

Kentucky-Tennessee 56
By Vern T. Whitney

Central West 56
By Whit

ARTICLES OF GENERAL INTEREST

The Advertisers' Index 17

Natural Gas Developments 66

Equipment and Supplies 68

Oil Country Goods Prices Held 68
By B. E. V. Luty

Men Known in Oildom and Personals 70

Great Growth of the Oil Industry 108
By N. O. Fanning

Fuel Oil Consumed by Locomotives 110

Advance to Stimulate Drilling 114
By N. O. Fanning

Classified Want Advertisements 158-159-160

Crude Petroleum Statistics 192

REFINING AND MARKETING

Refining and Marketing News 164

Chicago Market Weak and Waiting 166
By J. B. Waldo

Reduction in East Follows California Contracts 167
By N. O. Fanning

Refined and Crude Prices 168-169

Tank Wagon Quotations 170

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Big Mexican Well Attracts Interest

Average daily production in United States week ended March 21, 1,940,263 bbls. Gain from previous week, 5,577 bbls.

South Liberty and Hull Pools Boost Texas Production. Oklahoma Shows Another Material Decline

Highest daily average estimated production last year, week ended August 23, 2,057,319 bbls. Lowest January 12, 1,871,143 bbls.

By Andrew M. Rowley

There were plenty of developments in the crude petroleum situation during the past week to interest everyone in the oil business. The completion of a well in the light oil district in the South Fields in Mexico rated as making between 100,000 and 200,000 barrels a day; the steady climb in production of the Gulf Coast area, mentioned in these columns last week and which has continued until the output of that area on Tuesday of this week was estimated at 102,000 barrels; the reductions in posted prices of crude in Pennsylvania and the Central West Fields, the former ranging from 20 to 35 cents a barrel and the latter a straight cut of 10 cents a barrel; the big decline in production in Oklahoma which decreased nearly 14,000 barrels a day last week, and the continued weakness in the refined oil market which many operators fear may affect the crude oil situation—these were the high spots in the news of the week.

The big well in Mexico was completed March 17 by the Hausteca Petroleum Company, a subsidiary of the Pan-American Petroleum & Transport Company. The pay sand was tapped at a depth of 2,086 feet with a sub-sea level of 1,951 feet, which marks it as a shallow well for that sector, other completions being considered. The well, No. 44 Tierra Blanca, started flowing between 100,000 and 200,000 barrels daily, most estimates placing it at the latter figure. The oil went 400 feet above the derrick and the tools were blown 200 feet into the air. After two hours' work, the well was shut in until pipe line connections could be made. The pressure of the well was 700 pounds. The well is an extension of one kilometer west of previous production and the Pan-American thinks the well possibly is in a new line pool. Other companies seem to doubt that the well marks the opening of a new pool.

As the production from the Mexican well eventually will find its way into the United States, such a producer is bound to have an effect upon the crude petroleum situation here.

The South Liberty Pool in Texas, which started last week with three completions with a total initial output of 10,000 barrels a day, continued its activity during the week with several big wells, one of the Monarch Oil & Refining Company (Peer Oil Corporation) flowing 3,000 barrels through a 1-inch choke and having a potential production rated as high as 10,000 barrels. The Hull Pool, in Texas, also forged to the front with greatly increased output and is continuing its spurt, two wells being completed this week having a total initial output of 5,000 barrels.

Operators throughout the Mid-Continent were not disheartened by the crude oil reductions in Pennsylvania and the Central West. It was felt the cut in Pennsylvania was due to owners of crude there refusing to sell their oil. With production in the Mid-Continent showing material decreases each week, operators feel the crude situation is in fairly good shape. The production of Oklahoma alone has dropped nearly 40,000 barrels daily during the past month with Tonkawa slipping rapidly. It is believed if the crude oil producers and refiners throughout the Mid-Continent "sit tight in the boat" and not permit themselves to be swayed by fluctuations in the stock markets or by rumors not based on fact, the crude situation will right itself as soon as the hot weather brings the big demand for refined oil products. It is conceded by most men the weak link in the chain is the refined market situation and it is hoped there will not be any distress gasoline thrown on the market. The presence of much distress product naturally would further weaken the entire refined oil price structure and might result in lower crude oil prices.

The North Central Texas area continues to maintain a high daily average production while wildcatters are especially active in that territory. An example of this activity is shown in the fact plans have been made for the starting of about 100 tests, nearly all in Wilbarger County, in an effort to thoroughly test the district between the Electra Pool on the east and the South Vernon Pool of the west.

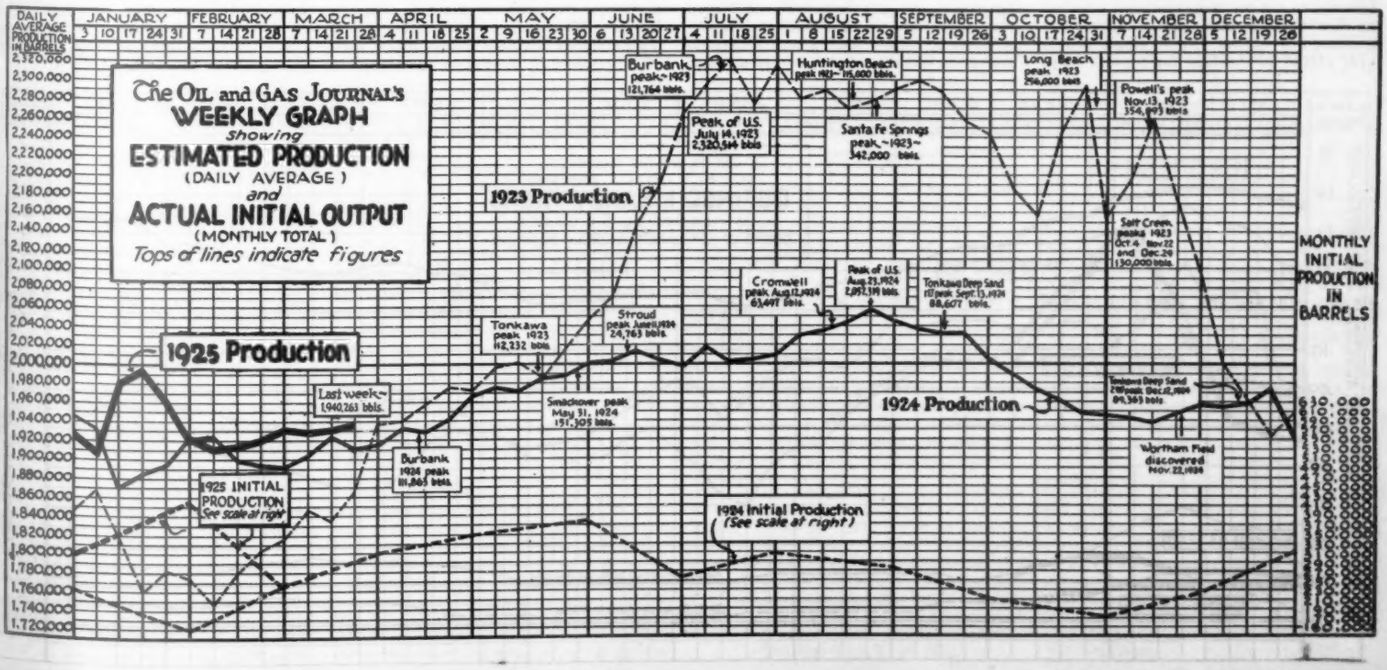
California registered a slight decline during the past week. Wortham is holding up its production, showing an increase of 900 barrels a day. The deep sand area of the Smackover Field was responsible for a gain of 7,500 barrels daily recorded in Arkansas during the week. Activity there continues as a result of the discovery of the new producing sand, there being 138 operations under way at the beginning of this week.

PRODUCTION IN THE UNITED STATES

Estimated daily average crude oil production in the United States for the week ended March 21, and a comparison with previous week follows:

	Mar. 21	Mar. 14
Oklahoma—Northern Fields:		
Tonkawa	73,015	81,915
Burbank	56,770	56,115
Other Osage Fields	35,865	36,690
Cushing and Shamrock	22,540	22,885
Bristow and Eastern Bristow	33,495	33,565
Cromwell	30,340	32,770
Papoose	28,210	29,690
Northern Miscellaneous	101,620	101,605
Southern Fields	64,050	64,575
Total Oklahoma	445,905	459,810
Northern Louisiana	50,325	50,534
Arkansas—		
El Dorado and Calion	9,290	9,200
Smackover Light	31,865	32,430
Smackover Heavy	73,205	65,705
Stephens and Nevada	3,615	3,677
Total Arkansas	117,975	111,012
North Central Texas	143,623	143,545
Powell	56,850	57,400
Mexia, Currie, Richland, etc.	32,130	33,030
Wortham	77,600	76,700
Kansas	84,535	84,595
Total Mid-Continent Area	1,008,943	1,016,626
Gulf Coast	96,785	78,895
Southwest Texas	42,410	43,145
Eastern	100,450	100,200
Rocky Mountain Area	90,175	92,320
California—		
Santa Fe Springs	49,000	48,000
Long Beach	115,000	117,000
Huntington Beach	40,500	41,000
Torrance	40,000	41,000
Dominguez	50,000	52,000
Remainder of State	307,000	304,500
Total California	601,500	603,500
Total United States	1,940,263	1,934,686

→ Increase, 5,577 Barrels ←



Standard Purchase Aids Gasolines

Indiana Company's Buying Stops Decline in Motor Fuels. Fuels and Kerosene Lower. Future Price Trend Depends on Refiners

By C. O. Willson

The action of the Standard Oil Co. of Indiana in entering the market with the apparent intention of buying a substantial quantity of gasoline was the feature development of the past few days in the Oklahoma (Group Three) refined market. Actual buying by the company the first of this week and rumors the latter part of last week that it intended to enter the market served to check the rapid slump in prices, which has been under way for several weeks. Prices on 58-60 U. S. Motor gasoline which the company is buying advanced slightly on Monday with many sellers predicting further increases by the end of the week.

There were no other developments which point to a possible shift in the generally slow market situation of the past month. Fuel oil prices, despite some improvement in the demand in Oklahoma, are 5 cents a barrel lower than a week ago with slightly lower prices on gas oil. Kerosenes and distillates are both sluggish and buyers were able to cover their immediate requirements at prices fractionally lower than last week. The better tone in refinery gasolines does not apply to natural gasolines, all grades of which are approximately 1 cent lower than last week. The demand for lubricants is still spotted and sellers in a few instances, at least, have been forced to meet competition outside the State with lower prices. There were practically no inquiries for Oklahoma wax during the week.

Standard's Action Important

Market observers generally are agreed that the Standard of Indiana action previously mentioned is practically the only ray of light apparent at this time in refined markets. Although it has no direct connection with the markets for fuel oil, kerosene and other products observers believe that a better market tone will prevail for these and other products if the gasoline market conditions can be improved.

The Indiana company's purchase resembles in some respects that of the Standard Oil Co. of New Jersey last year. It will be recalled that in May of last year the New Jersey company attempted to aid the Mid-Continent gasoline market with a purchase of 10,000,000 gallons, one of the largest single orders ever placed in the field for prompt shipment. The Indiana company apparently does not intend to purchase all the material at one time prefering to buy in small quantities with the expectation that it will be of greater aid to the market than was the New Jersey purchase last year. The latter proved of temporary benefit, the gasoline market continuing to slump a few days after the large purchase.

The Indiana company started buying on Monday at a reported price of 10¼ cents for 58-60 U. S. Motor. Additional purchases were placed on Tuesday, the total for the two days probably not exceeding 100 cars. Several refiners shared in the business, the Tulsa buyer for the company apparently endeavoring to place the orders with refiners who were especially in need of moving material.

Opportunity for Refiners

Although no definite announcement has been made it is understood the company has indicated its willingness to keep in the market with small purchases every few days over the remainder of March and April, providing sufficient support is given by other buyers and sellers to prevent a further collapse in the gasoline market. There is nothing to indicate that the Standard's action is anything more than an offer on its part to aid the Mid-Continent refiner in preventing a complete demoralization of his markets. Contrary reports are current to the effect that the gasoline stocks of the Indiana company are low and that it was forced into the market to supplement the output of its own refineries. It has also been reported that the company will be forced to buy substantial quantities of gasoline throughout the spring and summer months, as it did for several years prior to 1923.

Those in close touch with market developments, however, do not expect the Indiana company to continue as a buyer of Mid-Continent gasoline indefinitely and express the opinion that such an expectation on the part of the refiners will result in disappointments later. The Indiana company, including the Midwest Refining Co., has a refining capacity in excess of 150,000 bbls. daily. This does not include the Standard of Kansas plant in Kansas. The refineries are well equipped with cracking plants. Operating on high gravity crude it is obvious the company does not need any outside aid provided it desires to obtain its gasoline from its own refinery operations as it has done for more than two years supplying both an export and domestic demand. The company also has plenty of crude available for its refineries.

Fear that the weak gasoline market in the Mid-Continent would force a general decline in the tank wagon prices of the 11 States of the Middle West where it markets, is probably the most important motive influencing the company at this time. Along with other large oil interests, the company believes present market conditions can be remedied provided some of the distress material now available is absorbed and the refiners of the Mid-Continent curtail their output to a point in line with the demands of consumption. Leading market authorities agree the present unsatisfactory market is due to the heavy refinery operations of January and February which brought a surplus of practically all refined products.

Situation Serious

Unless the warning is heeded in regard to the refinery operations petroleum markets generally are threatened. The reductions in Pennsylvania, Middle Western and Smackover crudes and the 1 cent reduction in Eastern gasoline tank wagon prices including several States of the Southwest already reflect this danger which many believe threatens the crude and tank wagon price structures of the Mid-Continent and Middle West. Unfavorable developments have come rapidly during the past week and they have resulted in some uneasiness even in Mid-Continent crude markets where price advances were expected up to two weeks ago.

Commenting on this situation an official of one of the largest Mid-Continent crude purchasing companies on Monday said:

"If the combined Mid-Continent oil industry will sit steady I can see no reason why this should not be a prosperous year for all of us. There is not too much crude and there is nothing to indicate at this time that there will be. Our company is drawing on storage and trying to buy new production. My information is that other big buying companies are doing the same thing with the possible ex-

(Continued on Page 170)

REFINED MARKET BAROMETER

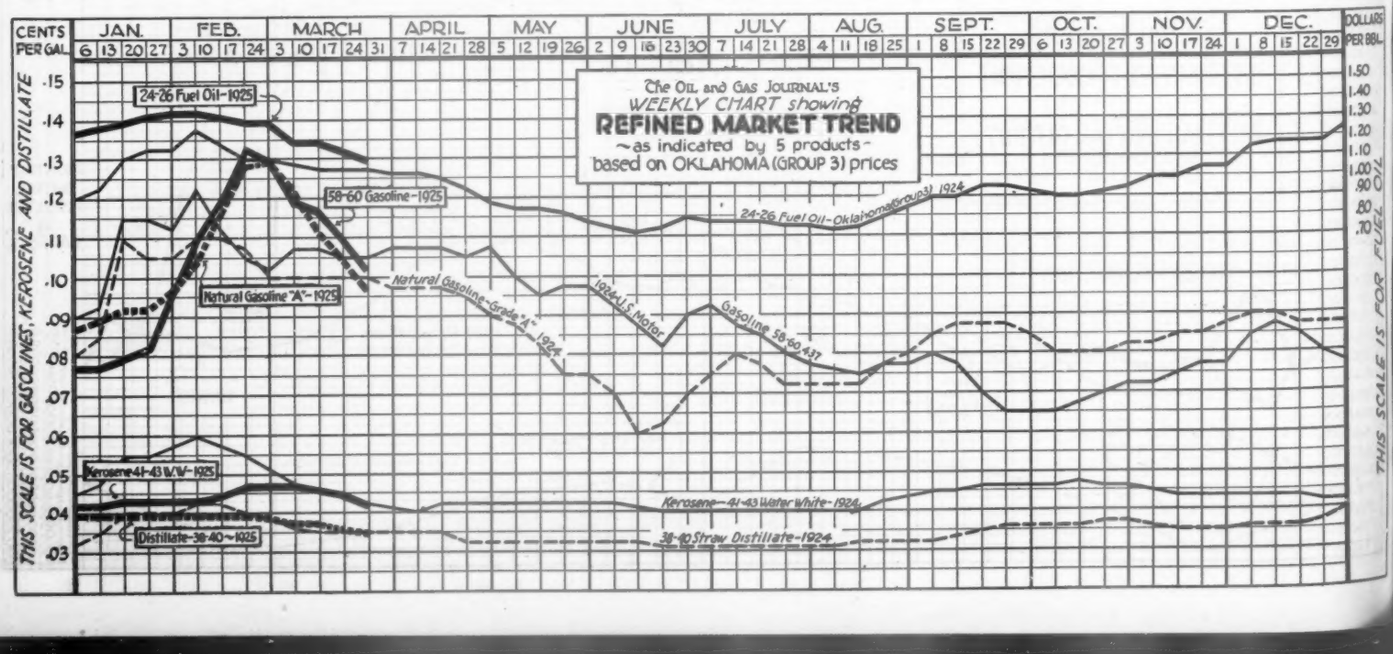
Scattered reductions in crude and gasoline tank wagon prices during the past week were reflected in a generally unsettled and softer motor fuel market at the refineries. Gasoline prices including natural gasolines and blends are ¼ to 1 cent lower than a week ago with surplus material available at distress prices in practically all the refining areas. The Mid-Continent gasoline situation has been aided through purchases in Oklahoma by the Standard Oil Co. of Indiana for delivery at its bulk stations in the Middle West. Fuel and gas oils are generally sluggish outside the West Coast, where prices are firm with a strong demand. The kerosene, distillate and gas oil price trend continues downward with no general improvement in the demand. Export prices on lubs are lower in the East. There were no important changes in the domestic lub markets. There is a dearth of new inquiries for wax and both export and domestic prices are lower.

Mid-Continent—All prices with the exception of neutrals and bright stocks lower. Decline in gasoline market for week averaged approximately ½ cent. Better tone in Oklahoma and Kansas gasoline market since first of week due to purchases of Standard Oil Co. of Indiana. Little demand for natural gasolines and prices dropped from ½ to 1 cent on all grades. Fuel oil prices from 2½ to 7½ cents lower in all areas. Kerosenes, distillates and gas oils lower. Little demand for wax.

Pennsylvania—Gasoline prices lower. Kerosene soft. Wax soft. All grades of lubricants slow. Fair demand for fuel oils.

California—Gasolines unsettled and prices lower including natural gasoline Kerosenes and engine distillates lower. Fuel oil and fuel distillates firm. No change in lubricants.

Chicago—All products weak. Gasoline, kerosene, fuels, distillates and gas oils lower. No change in lubs.


CENTS PER GAL
JAN. FEB. MARCH APRIL MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.
DOLLARS PER BBL.
THIS SCALE IS FOR GASOLINES, KEROSENE AND DISTILLATE
THIS SCALE IS FOR FUEL OIL
The Oil and Gas Journal's
WEEKLY CHART showing
REFINED MARKET TREND
~as indicated by 5 products~
based on OKLAHOMA (GROUP 3) prices
24-26 Fuel Oil-1925
58-60 Gasoline-1925
Natural Gasoline "A"-1925
Kerosene 41-43 W.W.-1925
Distillate-36-40-1925
24-26 Fuel Oil-Oklahoma Group 3 1924
Natural Gasoline-Grade "A"-1924
1924 U.S. Motor Gasoline 58-60 A.S.T.
Kerosene-41-43 Water White-1924
38-40 Straw Distillate-1924

American Companies United in Irak

Backed by State Department, They Secure 30 per cent Interest in Concessions Granted to the Turkish Petroleum Company

By L. M. Fanning

The signing at Bagdad of a convention between the Turkish Petroleum Co. and the Irak Government for the exploitation of petroleum deposits throughout the entire country, excepting the Vilayet of Basra, for a period of 75 years, has been confirmed by interested American oil companies. While at the time this is being written no official statement has been made by spokesmen for the American group, it is probable an announcement will be forthcoming when further details of the arrangement reach this country.

Consummation of the Turkish Petroleum Co.'s concessionary arrangement is of far reaching importance. Inclusion of American interests in stock ownership of the Turkish Petroleum Co. followed American Government protests against the San Remo agreement which ignored this country entirely and which precipitated the Mesopotamian oil controversy extending over several years at the end of the World War. It marked a change in the British closed door oil policy in the Near East. The Turkish Petroleum Co. means that three of the great powers, Great Britain, France and the United States, have joined hands in petroleum development in one of the greatest potential oil areas in the world.

Of outstanding significance, also, is the fact that it marks for the first time an organized effort on the part of American oil interests to develop foreign production. It is the first instance of group interest and operation by American companies. Both Standard Oil and independent companies are included in the group.

Without official confirmation, it is possible to say that the companies which comprise the American group are the Standard Oil Co. of New Jersey, Standard Oil Co. of New York, Atlantic Refining Co., The Texas Co., Gulf Oil Corp., Sinclair Consolidated Oil Corp. and Pan American Petroleum & Transport Co. The companies are among the largest oil concerns and all have been actively interested in foreign development. They represent an aggregate stock capitalization of over $1,500,000,000.

Interest of American Group

It is understood the interest of the American group in the Turkish Petroleum Co. amounts to 30 per cent. The company, which is a British incorporation, was organized in 1912 and represented a compromise arrangement between the British, German and Holland interests, all active in securing petroleum rights from the old Turkish Government. In 1914 there was a reorganization of the Turkish Petroleum Co. which gave 50 per cent of the stock ownership to the Anglo-Persian Oil Co., 25 per cent to the Royal-Dutch interests and 25 per cent to the Deutsche Bank. In June, 1914, the Grand Vizier, on behalf of the Turkish Government, wrote to the British and German ambassadors a letter stating that the Turkish Ministry of Finance consented to lease petroleum deposits in the vilayets of Mosul and Bagdad to the Turkish Petroleum Co., the terms of the contract to be made at a later date.

When the World War broke out negotiations ceased. But after Germany's defeat the matter came up at the San Remo conference. At this conference the French were given the 25 per cent interest formerly held by the Deutsche Bank, or German interests. This made the Turkish Petroleum line up 50 per cent British, 25 per cent Royal-Dutch Shell and 25 per cent French.

That this line-up was disturbed and American interests recognized, was only brought about by protests and strong representations by the American State Department. The question of a possible world oil shortage was very much alive at the time, and had considerable influence in stirring the American Government to insistence of the open door policy. The drain on our oil resources in supplying the bulk of the world's needs was a matter of concern. That the opening up of foreign fields and participation of American oil companies in such activities offered signal opportunity for practical conservation of our resources became the belief of the men to whose foresight the present far reaching development must be credited.

United Action

It was first necessary to convert the American companies to the idea of forming a group. Nothing like it had been attempted and the fact that some of the larger companies were active on their own account in foreign oil fields operated as an obstacle. Nevertheless, American companies were clamoring for the backing of their Government in their operations abroad and the Government wanted some assurance that the companies would go actively into foreign exploitation if they did receive Government support.

It will be recalled that in 1919 Senator Phelan introduced a bill in the United States Senate for the formation of a co-operative oil corporation to engage in foreign operations and to have Government support. While this legislation was not acted upon there was plenty of activity behind the scenes. The proposal engaged the attention of the Government and of the oil companies.

During the next year it is understood that Mark L. Requa, who had been General Director of the Oil Division of the Fuel Administration during the war, tried to get the leading oil companies and many smaller companies interested in a project for organization of a $100,000,000 oil company to engage in foreign development.

Dr. Van H. Manning, formerly director of the United States Bureau of Mines and who had just become director of research of the American Petroleum Institute, was actively interested in the question of American participation in foreign oil development. He carried on much of the work that was done on the subject with the foreign relations committee of the institute. Dr. Manning is now technical advisor of the Pan American Petroleum & Transport Co.

In a statement issued in October, 1920, Dr. Manning declared that American diplomats were doing all that is humanly possible to untangle the intricate oil problem; that no greater or more lasting and far reaching service could be rendered to the world than making possible and effecting the securing by or for American citizens a participation in the development of the world's resources of petroleum. This could be accomplished, he said, under the following plan:

"1. To make a careful study of the oil resources of the world and the laws and regulations governing these resources.

"2. Congress should enact a general reciprocity measure covering all trade relations with foreign countries.

"3. To encourage our nationals to acquire and develop and market oil in foreign countries: (a) By an assured adequate protection of our citizens engaged in securing and developing foreign oil fields; (b) By cooperative action on the part of the industry under Federal charter or otherwise that will permit the industry more effectively to perform its function in seeking out and acquiring oil territory in foreign country, developing the same and distributing the petroleum produced therefrom."

When these things have been accomplished, he stated, then the State Department should begin its negotiations to develop an oil entente for all nations. "We cannot indefinitely carry the burden of furnishing the potential supply of petroleum for the world," he said, "and if there could be brought about an association of international relationship between these oil producing countries working in harmony to furnish the world with power and light, a repetition of a World War would be impossible."

Secretary of Commerce Hoover became interested and it is understood that he strongly favored cooperative action on the part of American oil companies in foreign development. In 1921 he called a conference of leading oil company representatives at Washington. The result of this conference was the organization of an American group which agreed to go into foreign exploitation in a cooperative way.

England Came Round

The activity of the American Government and the work of those who saw the benefits of joint action by American companies brought about a change of policy on the part of Great Britain. The British abandoned closed door tactics and looked upon the formation of the American group as an opportunity to demonstrate the fact. When Walter C. Teagle, president of the Standard Oil Co. of New Jersey, went to Europe as a representative of the American group, the parties interested in the San Remo agreement were ready to revise the line-up as regards the Turkish Petroleum Co. so as to permit American participation.

As a result of these negotiations, it is understood the Anglo-Persian Oil Co. relinquished 20 per cent of its 50 per cent share of the Turkish Petroleum Co., the Royal Dutch-Shell 5 per cent of its 25 per cent and the French interests 5 per cent of their 25 per cent, to the American group, giving the latter a 30 per cent interest, or in other words, on an equal footing with the Anglo-Persian Oil Co. British interests, however, are also in the Royal Dutch-Shell. The managing direction of the Turkish Petroleum Co. will be in British hands.

The recent action of the Irak Government in signing the convention with the Turkish Petroleum Co. means that the concession has been revised and passed upon to the satisfaction of all parties concerned. Previously there has been considerable doubt as to whether the Irak Government would pass favorably upon the agreement, whose validity has been questioned from the start. Turkey's claims for Mosul now before the League of Nations affect the concession to a certain extent, but while the present Turkish Government is not expected to ratify the Turkish Petroleum Co.'s concession, it may turn out that such ratification is not required.

FEDERAL TRADE COMMISSION BARRED FROM "FISHING" BY SUPREME COURT

There was an interesting sequel to the "fishing expedition" of the Federal Trade Commission into the oil business last year in the decision of the United States Supreme Court pronounced last week in the grain case, in which the country's highest court explicitely declared the commission cannot demand access to the books of private corporations in a general investigation.

This recalls the firm attitude taken by Judge Amos L. Beaty, president of The Texas Co., in refusing the agents of the commission permission to prowl through the books of that corporation. Judge Beaty's position was stated in an article which will be remembered by readers of The Oil and Gas Journal, "We must defend ourselves or not be defended."

In that statement, entitled "The Federal Trade Commission," Judge Beaty declared: "If we do not defend ourselves we shall not be defended. If, seeing the place where official activity ends and private rights begin, we have not the courage to speak out, we are unworthy of trust and our self-respect is forfeited. One beauty of our system of Government is that every citizen, high or low, has the right to be heard if the Government goes too far, and is not hanged or put in stocks if he states the facts."

Judge Beaty's Position

Judge Beaty stated that The Texas Co. responded with promptness and in full cooperation to the Federal Trade Commission's questionnaires and other requests; that it collaborated in every way with agents of the commission and that if the work in providing the information had been done by independent accountants it would have cost at least $50,000. He states that a request of commission agents for permission to examine the files of the company at its Denver office was declined, under his telegraphic instructions, on the ground that the commission had no right to go into the files on a fishing expedition. Conferences were held between Judge Beaty and the attorney of the commission, and the company did not change its attitude. Subsequently the United States Supreme Court rendered its decision in the case of the Federal Trade Commission versus the American Tobacco Co., to the effect that it is contrary to first principles of justice and to the Constitution to search private records merely on the chance that something will turn up. In spite of this decision and of the known attitude of the president of the company, representatives of the commission made their requests on the company's Houston and Chicago offices. In the latter case the local representative of the company permitted them to examine the files. Judge Beaty asserts that "the commission had no more right to have its agent prowl through these files than it had to search the clothes on the back of a citizen."

Judge Beaty contended that such examinations constitute an unreasonable search and are prohibited by the Constitution of the United States in the Fourth Amendment, reading as follows:

"The right of the people to be secure in their persons, houses, papers and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized."

In its recent report on its investigation of the gasoline business, the Federal Trade Commission said: "It is possible that other evidence might have been found had not some very active and important companies failed to cooperate with the commission, refusing its agents access to their files for the purpose of examining and copying any documentary

(Continued on Page 161)

Directors of A. P. Institute to Meet

Will Hear Report of Committees on Conservation Questionnaires. Rate Investigation to be Considered at Tank Spacing Conference

By L. M. Fanning

The board of directors of the American Petroleum Institute is scheduled to meet in New York on April 8. It is understood that the investigation of the committees into conservation matters is taking shape and that this will be the principal topic discussed by the board. Following adoption of a resolution by the board on January 12 appointing a committee of 11 to study questions raised by the Federal Oil Conservation Board, this committee, subdivided into the following sections, supply, demand and growth and development of the industry, has been actively engaged in collecting facts and getting material into the form of an exhaustive report. When the report is completed and passed upon by the board of directors of the institute it will be transmitted to the conservation board.

The members of the committee of 11 of the institute are: J. Edgar Pew (ex officio), Sun Oil Co., president of the institute; E. W. Marland, Marland Refining Co.; D. M. Folsom, General Petroleum Co.; E. T. Wilson, Mutual Oil Co.; K. R. Kingsbury, Standard Oil Co. (California); George S Davison, Gulf Oil Corp.; W. S. Farish, Humble Oil & Refining Co.; J. C. Donnell, Ohio Oil Co.; W. N. Davis, Mid-Continent Oil & Gas Association; Frank Haskell, Tidal Oil Co., and R. L. Welch (ex officio), American Petroleum Institute.

Rate Investigation

Another matter which will come before the institute directors for consideration is the matter of institute policy as regards the investigation by the Interstate Commerce Committee of the rate structure of the common carriers, this investigation having been announced by the commission on March 12. Notices of the investigation have been sent out to all industries, agricultural interests and railroads, including the petroleum industry.

Prior to consideration of this matter by the board, however, the regular meeting of the transportation committee of the institute will be held in Chicago on April 3, at the Congress Hotel, when the commission's rate investigation will be fully discussed from the standpoint of the petroleum industry, the committee desiring to get the views of the industry into form of a recommendation to the board of directors of the institute as to what action it should pursue. In his notice calling the transportation meeting, W. R. Boyd, Jr., assistant general secretary of the institute, says:

"As you know, it has not been the policy of the institute to participate in rate controversies because, in general, they involve local, sectional or competitive, rather than national issues. In the present investigation it is apparent that changes may be made in rates which will affect the general level of rates of various industries as a whole.

"The executive officers of the institute expect to call the present situation to the attention of the board of directors to ascertain whether in the judgment of the board, the institute should participate in the hearings. It is thought that an exchange of views between traffic managers will be helpful to the board in its consideration of the problem.

"Notice of this meeting is being mailed also to all oil company traffic managers whose names are available to us inviting them to attend the meeting and participate in the discussion, and it is suggested that all traffic managers bring the matter to the attention of the principal officers of their respective companies and discuss the matter with them before coming to the meeting."

The Interstate Commerce Commission's investigation is initiated as directed by a joint resolution of Congress—the so-called Hoch-Smith resolution, approved January 30. The investigation brings in question all rates, fares and charges, and all classifications, regulations and practices relating thereto, of common carriers subject to the interstate commerce act. It is made in order to determine the extent and manner in which the rate structure is in any respect unlawful, and to make in accordance with law such changes, adjustments and redistribution in that rate structure as may be necessary. The purpose behind the Congressional action was a means of relief for agricultural products, due to depression then existing, the commission's order, in accordance with the Congressional resolution, stipulating that it "effect with the least practicable delay such lawful changes in the rate structure of the country as will promote the freedom of movement by common carriers of the products of agriculture affected by the existing depression—including live stock, at the lowest lawful rates compatible with the maintenance of adequate transportation service."

It is doubtful that the petroleum industry, although periodically depressed and sometimes depressed over a considerable period of time, will make any effort to secure for itself reduction or readjustment of rates on petroleum products. The interest of the industry in the present investigation will probably be largely that of defense in case the commission, in reducing rates on other commodities, considers the raising of rates on petroleum products and other commodities to make up the difference to the carriers.

The petroleum industry has only once acted in common in the matter of rate changes, and that was in 1921 when under the auspices of the American Petroleum Institute a special rate committee functioned and appeared before the Interstate Commerce Commission when it was considering a general reduction in rates. During the war there had been a general horizontal increase of 25 per cent; as a result of the investigation of 1921-22, the commission in 1922 ordered a horizontal reduction of 10 per cent which included petroleum products.

Tank Spacing Meeting

An important meeting of the petroleum industry, under the auspices of the American Petroleum Institue will be held at Congress Hotel, Chicago, April 9 and 10, for the purpose of taking action on proposed recommendations for tank spacing and the safeguarding of automobile oil tank trucks as proposed by the National Fire Protection Association. The National Fire Protection Association has issued a proposed revision of a suggested ordinance regulating the use, handling, storage and sale of flammable liquids which it plans to recommend for adoption by towns and municipalities and which will receive consideration at the annual meeting of the association May 12, 13 and 14.

A special subcommittee of the institute's committee on fire prevention and protection comprised of Harry L. Shoemaker, of the Standard Oil Co. (New Jersey), and Frank A. Epps, of the Tide Water Oil Co. and Ralph J. Reed, of the Union Oil Co. of California, has been engaged for weeks in collecting and analyzing the industry's present practice of tank spacing and its tank fire record covering the past 10 years.

This committee's report and the recommendations of the committee on fire prevention and protection will be submitted to the conference for discussion and approval. It will relate, specifically, to the controversy which has arisen over storage tank spacing and distance tables. An arbitration or conference committee, composed of representatives appointed by the American Petroleum Institute, the National Board of Fire Underwriters, the Bureau of Explosives, the Associated Factory Mutual Fire Insurance Companies and the International Fire Chiefs Association, appointed to settle the controversy, provided there is unanimity of agreement, is awaiting the result of the conference before taking action.

Another matter to come up at the conference regards the tentatively drawn regulations just issued by the conference committee on tank trucks of the National Fire Protection Association committee on flammable liquids, for the safeguarding of automobile tank trucks "against the fire hazard and loading and unloading operations in connection therewith. This is the first time that regulations of this character to be offered for uniform adoption by towns and municipalities have been proposed by the National Fire Protection Association.

COMMERCIAL OIL AND GAS FINDS PREDICTED FOR PACIFIC NORTHWEST

By Dorsey Hager

Washington and Oregon have for many years been considered States with little or no promise for possible oil or gas production. That impression is due to be upset for these States during the past year and at present will prove or disprove oil and gas possibilities of the Pacific Northwest.

Geological conditions in both States favor the finding of oil and gas. There are good anticlines and domes there, and good sands, organic material sufficient to have formed oil and gas, accessible drilling sites, plentiful water and good transportation; large towns and cities to furnish good markets for any gas found; and above all, a wonderful market for oil, a territory large enough to care for 100,000,000 bbls. of oil per year.

In an article in The Oil and Gas Journal of August 21, 1924, I described the local geology and the changes in correlation in Washington. All these points have been merely strengthened with time. Further, our work in Oregon has shown similar favorable geological conditions in places there. The early geologists failed to find good folding in Oregon, but granted other conditions favorable. We have now found good structural conditions. Also we find that the early correlations in Oregon have been corrected by the State of Oregon geologists themselves, and so we have no grounds of difference. Structure is found there now because of the numerous highway cuts and logging roads that were not in existance when the early geological work was carried on in Oregon. The idea of a general northward dipping unbroken monocline over northern Oregon has been changed.

Predicts Commercial Find

I now feel safe in making the prediction for both Oregon and Washington that commercial oil or gas fields, or both, will be found in these States. Geological concepts must change from time to time to agree with new findings.

In 1918-1919-1920, I reported favorably on oil prospects in the Panhandle of Texas, in New Mexcio and in northern Arizona. The Panhandle is now producing oil and gas. Both the San Juan Basin of New Mexico and the Pecos Valley areas are now productive. In 1918 I reported favorably on the oil prospects near Colorado City, Tex., and that area is now producing.

As yet northern Arizona has not been sufficiently tested to determine the presence of oil. Oregon and Washington have better geological conditions than those other States, and I see no reason to fear the ultimate result of testing here.

Geologists may differ in opinions, but after our experiences in northern Montana, where nearly all the old line companies "scouted" the idea of oil on the Sweetgrass Arch, and after the remarkable work of the Union Oil Co. in opening the Wellington and Fort Collins Field of Colorado, and the Texas and Transcontinental opening the Moffat County fields of Colorado, geological opinions must be considered to have weight, but mere adverse opinions count for little, unless based on sound reasoning and experience.

Can Now Find Exposures

The Union's feat in opening the Dominguez Hills near a deep dry hole drilled by the Standard Oil Co. of California, and the Midwest's opening of the Hogback Field in the San Juan Basis of New Mexico, after the Standard's (Richmond Oil Co.) failure farther north, must all be considered as evidence that geological opinions, while valuable, are subject to change by either more careful checking, or by actual finding of oil through drilling. In Washington and Oregon careful checking of geological data is now possible through the opening of those areas as a result of logging operations, and highway work so that good exposures can be found. The dense undergrowth and heavy timber for years obscured the exposures that are now available. Many millions of dollars of expensive highways and roads, and thousands of miles of logging railroads allow careful studies that never before could have been made.

The basalt "bogey," too, has been exploded. Instead of many thousands of feet of solid basalt overlying and underlying western Washington and northern Oregon, the basalt occurs as comparatively thin beds between good thicknesses of sands, sandstones and shales. In 20,000 feet of sediments, 2,500 feet of basalt occurs, a ratio of 1.7. This basalt, however, occurs in the proportion of 1,500 feet in the first 3,000 feet of beds, and the balance mainly through the last 8,000 feet of sediments. Any drilling sites now known will miss most of the upper basalts.

There are few faults, and in Washington few intrusions of igneous rock. Oregon has more intrusives than Washington, but there are favorable areas free of intrusives.

Our first well is now drilling on a good dome at Montesano, Grays Harbor County, Washington. The New York Oil Co. will start April 30, in the same county, and several other tests are planned this year. If oil or gas be found, Oregon and Washington will have numerous fields. Oil men will watch this development here carefully, and I anticipate a real rush here before the end of 1925.

Oil Business Centers Around Refiner

Continuance of Industry Depends Upon His Making a Profit. Cyclic Condition on Prices Reflection of His Policy in Buying Crude

By N. O. Fanning

NEW YORK, March 23.—Too much has been said of the problems and responsibilities of the petroleum industry as a whole, and too little of the problems and responsibilities of the individual company. A great deal of the misunderstandings of the industry lie in the assumption that one group of oil companies has one set of problems, while another group has an entirely different set. While each individual concern, large or small, has his own particular problems of a minor nature, the major problems of all are the same.

The oil business centers around the refiner, who on the one hand pays for the crude oil and on the other disposes of his products to the consumer. All intermediate steps in the process are incidental. The continuance of the oil business year after year depends upon the refiner making a profit. Theoretically, at least, the refiner should fix the price of refined products and the price of crude, although actually the consumer, through demand, and the producer through supply, is a potent factor. The consumer knows, however, that he, individually, has little or nothing to say with regard to the price he pays for a product, while the producer does not arbitrarily fix the price of crude. The refiner is the individual who fixes the prices, however, upon the law of supply and demand, or in other words, of competition.

The biggest problem, then, rests with the refiner, in the last analysis. That problem is to make the price low enough to satisfy the consumer while at the same time high enough to assure continued production of crude petroleum.

The most urgent and difficult problem of the two is that of assuring an adequate crude supply, on which the whole industry rests. It is this problem that causes most of the division of opinion and misunderstanding within the industry, as well as outside criticism. The raw material problem is equally urgent with the large and small refiners and an adequate appreciation of it is considered necessary to profitable operation.

Refiner at the Base

Any plan to help the oil industry as a whole is likely to fail unless it takes into account first the interest and welfare of the refiner. This statement might be misunderstood when it is also stated that the crude problem is the most urgent one of the industry, but by this latter is meant the crude problem as related to the refiner.

It is not necessary to give evidence to prove that the chief hazards in the oil industry lie in production due to the uncertainty of finding oil and the large losses from drilling dry holes. It is safe to say that these hazards cannot be eliminated by Government regulation nor in any other way, so long as oil must be recovered from the ground by means of the drill. Why not admit this hazard at the start and spend more time on features of the situation which can be improved.

While the hazard of drilling cannot be eliminated it can be confined more to the actual producer, who not only loses by his failure to strike oil, but is the greatest benefactor when oil is struck. No radical change in existing methods is suggested in this connection. The problem can be handled simply by recognition on the part of the individual refiner, large or small, first of the importance of production, and secondly of its hazards. It may seem unnecessary to stress these obvious points, yet the so-called troubles of the petroleum industry point to a more than general disregard of their full significance.

The refiner, in the last analysis, is the actual buyer of all of the crude oil produced. The purchaser may handle it, but the fact remains that he must resell it to the refiner at a profit if he is to exist. It is not the action of each individual refiner, perhaps, but the concerted action of all, that determines the price of crude and refined oil. For at one period refiners are apparently willing to pay any price for crude, while at others, they may not be willing to buy at any price.

The large refiner as a rule, buys more than he needs when crude is a drug on the market, while he curtails his purchases when crude is at its peak. To do so means to carry stocks of crude a short or long period of time at considerable expense, but the average cost of buying crude when it is cheap and carrying it has been found to be less than to pay the higher prices.

The greatest stability lies in an even demand for crude oil. What causes an uneven demand is that during a period of low prices for crude many refiners do not buy, because refined oil prices are prooprtionately low, and they do not see any immediate profit. Often, if the truth may be told, they cannot afford to buy more crude than they actually need at the moment. The low prices finally result in a decline in production, crude becomes scarce and refined prices go up. Many refiners now in order to operate and as they hope, take advantage of the higher quotations for refined products, bid up the price of crude to extreme levels.

To a certain extent this cyclic condition cannot be eliminated. But it can certainly be improved, if each refiner puts a certain proportion of his net profits into purchasing crude when it is cheap, instead of disbursing his profits in other less permanent ways. When crude oil seems a drug on the market is usually the best time to buy it.

Crude and Refined Profits

That crude oil is the paramount consideration of the refiner is proved by many actual experiences. In one year a certain Texas refiner's bill for crude petroleum at the well constituted 77.9 per cent of his total expenses and 89.1 per cent of his total receipts. He lost an average of 37 cents per barrel on his operations.

In another insance 66.1 per cent of the total expenses, including marketing, depreciation, etc., comprised the price paid for crude (not including pipe line or tank car charges), while 72.1 per cent of the total receipts were paid out for crude. The average loss per barrel, taking everything into account was 47 cents. This was a western Pennsylvania refiner.

In still another case, 82.4 per cent of the expenses went for crude, 79 per cent of the actual receipts, and the refiner was lucky enough still to net 11 cents per barrel on the side of profit. This was an unusual case.

All these examples applied to refiners handling 5,000 bbls. of crude oil daily or less.

In the case of another refiner, handling 50,000 bbls. or more daily, 48 per cent of total expenses constituted the price paid for crude at the well, while 40.7 per cent of the total income went for raw material. This refiner made a profit after all charges of 46 cents per barrel.

In certain of these cases all, or practically all, of the crude run had to be purchased, while in others the refiner had a certain amount of his own production. But where a refiner has his own crude output, the producing operations carried on by him must be separate from his refinery operations because of their widely divergent nature. Even the biggest oil companies have suffered from lack of crude when they had their own production departments, while those that have had to buy the bulk of their crude have prospered, so that the crude problem is not affected as much as might be supposed by the question of whether a refiner is also a producer or whether he must buy his output.

Crude Oil Stocks

The amount of crude held in storage by a refiner whether at the refinery or in the field is one of the dominant questions related to the average price paid for crude. In this connection certain figures of the United States Geological Survey are interesting. At the close of 1918, when there was a shortage of oil, stocks of crude, excluding refinery stocks, were approximately 32 per cent as great as the deliveries of the preceding 12 months. At the close of 1924, when there was supposedly an oversupply, the stocks were the equivalent of 47 per cent of the preceding year's deliveries or consumption.

The figures were roughly as follows:

	Deliveries	Stocks	Pctg.
1924	750,000,000	350,000,000	47
1918	380,000,000	122,000,000	32

These percentages give a composite picture of the average amount of crude held by the oil companies of the United States as related to the volume of their sales during the preceding year. But the fact is that a few companies had much more than the percentage indicated, while a great many had much less, depending on their buying policies.

The average refiner can now take stock to see how he stands in relation to these Government figures.

Crude Transportation Costs

Secondary to the price which the refiner has to pay for crude at the well is the charge for transporting that crude from the well to refinery. This problem of the location of a refinery is one that is difficult to handle as existing refineries are more or less fixed, and cannot economically be moved. Another lesser, but important, problem is that of plant design as related to the qualities of crude available. This is related to the location of the refinery, as many are situated so that they can get crude from different fields as they choose.

The oil industry, however, is blessed with economical means of transportation for crude long or short distances, which reduces the seriousness of the transportation problem substantially.

OIL CONSERVATION BOARD ASKS OPINION OF OIL AND GAS JOURNALS

WASHINGTON, D. C., March 20.—The Federal Oil Conservation Board has issued the following statement:

Recognizing the comprehensive knowledge possessed by the editors of the country's great oil and gas journals concerning basic conditions of the general petroleum situation, the President's Oil Board has addressed a letter to these men inviting their views and suggestions apropos the inquiry now being conducted by the board to determine, if possible, what might be done to more equitably stabilize conditions in the oil world.

The Federal Oil Conservation Board, of which Secretary Weeks, Secretary Wilbur, Secretary Work and Secretary Hoover are members, having asked the views of the representative men in the oil industry, feels that the editors of these great national journals that have contributed so consistently to the welfare of the industry, are fully as competent to advise the Government as are the heads of the important oil corporations. These editors, in the opinion of the board, have a broad impartial viewpoint that embraces the interests of the Government as well as the interests of the oil companies and therefore their advice and recommendations are worthy of the most serious consideration.

Secretary sof the Interior Work, a chairman of the board said in making public the letter addressed to the editors, that the board would feel that its inquiry into conditions affecting the entire oil problem would be incomplete without the views of the men who, through their journals, have been the advisors and counsellors of the industry since the very inception of the industry in this country.

Text of Letter

The letter is as follows:

"Under the instructions of the President, this board is undertaking a comprehensive cooperative study of the problem which the United States is facing as the largest producer and the largest consumer of petroleum, with rapidly diminishing reserves, and as a part of its work it is addressing this letter to representatives of the technical press, and to those whose study of the subject and contact with the industry as authors, or as writers in an editorial, research, or similar capacity, make their observations and opinions of value in formulating a national policy covering various phases of the petroleum industry.

"Your views will therefore be much appreciated on the topics which follow and on any others which you may desire to discuss.

"(1) To what extent, if any, do you consider a shortage of petroleum imminent in this country?

"(2) To what extent and in what manner do you consider that any future shortage of domestic petroleum can or will be lessened.

"(a) By the increased use of substitutes including foreign oil, shale oil, coal distillates or organic distillates;

"(b) By reducing or avoiding waste in the production, transportation, refining, or distribution of petroleum and its products;

"(c) By reducing exports of domestic crude petroleum and its products;

"(d) By the substitution of coal for fuel oil; by the introduction of more efficient types of internal combustion engines; or by any similar economy in the use of petroleum and its products; and

"(e) By increasing the total recovery of petroleum from the ground, which is commonly held to average not more than about 20 per cent by present day methods?

"(3) In view of the existing situation, do you consider that the use of oil for domestic heating or for generating steam should be generally fostered and encouraged?

Retail Distribution

"(4) Considering the possibilities of the elimination of waste in retail distribution.

(Continued on Page 144)

Oil Burner Manufactruer's Opportunity

Chicago Convention Next Month Can Investigate Coal Propaganda Against Oil and Take Steps to Counteract It

By L. M. Fanning

When the American Association of Oil Burner Manufacturers holds its convention next month it would be well for it to undertake to investigate thoroughly what the coal interests are doing to discredit the use of fuel oil and particularly to discredit domestic oil burners. Some idea of the widespread activity of the coal people has been given in previous articles in The Oil and Gas Journal and while the vigor of their campaign is apparent enough, the oil burner manufacturers generally have taken little cognizance of it, and apparently have failed to undertake any systematic method of combating the type of material being broadcast.

Among some fuel oil and oil burner people the opinion is expressed that now the household fuel burning season is at its close there will be a let up to the coal propaganda. This is contrary to our information. It is apparent that the coal interests see in the present prices of fuel oil and in the low prices for coal an excellent opportunity to present their case, to prevail on consumers against making oil burner installations and to interest present oil users to return to coal.

A prominent oil burner manufacturer states that while there is no denying the fact the coal associations are spreading their material all over the country, he doubts the effectiveness of the campaign and believes the coal people may now be a little discouraged. Their present activity, however, does not indicate discouragement.

"There is no denying the fact that the coal associations all over the country have been busying themselves very actively in digging up every case of trouble with an oil burner which they could find and exploiting it as extensively as possible," this manufacturer says. "They have not been able to get a great deal into the newspapers but they have done a great deal of circularizing calling attention to individual cases, and quoting from various authorities regarding the cost of oil versus coal. Most of these quotations are based upon the B.t.u. content with no reference whatever to the higher efficiencies which can be obtained in extracting heat from oil than is the case with coal. This campaign is going on somewhat at the present time although it has had so little effect on the public mind that we think the coal people are perhaps a little discouraged."

Anthracite Pamphlet

The Anthracite Bureau of Information of Philadelphia is distributing a pamphlet entitled "Anthracite versus Fuel Oil" which attempts to answer for the householder who would consider the installation of an oil burner these four questions: "Is it safe? Is it economical? Is it practicable? Is it desirable?"

In answer to the first question the booklet goes back to the action taken by the Board of Standards and Appeals of the City of New York on December 1, 1919, when it issued 21 stringent rules governing the installation of oil containers and burners, and adds "even these do not seem to have proved sufficient and more rigid ones have since been promulgated."

To further quote the pamphlet: "It is different with anthracite. No rules are issued, no permits are required for installation of an anthracite burning equipment. It is absolutely safe. It is, to use the common expression 'fool proof.' Anthracite does not fire spontaneously no matter under what conditions or for how long a time it is stored, and elaborate tests carried on by the United States Bureau of Mines determined definitely that anthracite dust could not be made to explode. Anthracite will not ignite in a stove or furnace until a high temperature produced by the kindling fire is reached."

Then appear extracts from newspaper items on oil burner fires covering about three pages. The argument as to safety is concluded as follows: "There does seem to be some doubt as to the safety of oil as a domestic fuel."

The pamphlet argues away the question as to whether oil is an economical fuel by a comparison based upon B.t.u. content.

"Is the use of fuel oil practicable?" the pamphlet continues. "Surely. And it has its proper field of usefulness—in the ships of our Navy, for instance, and no one who has traveled in a train in the summer time when windows are open, behind a locomotive fired with fuel oil can help being impressed with the freedom from smoke and cinders. Fuel oil can be used and is extensively used for power purposes in stationary boilers and for heating, and the fact that the user is not put to the trouble and expense of ash removal is a decided point in its favor, but the future supply of fuel oil is as uncertain as the weather.

Oil Shortage Scare

"The year 1923 was one of unusually large production of crude petroleum, and fuel oil, the by-product from the oil refineries, has been in excess supply with prices consequently attractive to the anthracite consumer who has seen his coal bill steadily increasing, with no promise held out for lower prices. But some year in the near future must see a notable decline in the flow of oil from the wells to the refineries, and the domestic consumer of fuel oil may see his supply suddenly stopped or obtainable only at a sharp advance in price. In fact, the production of crude oil is now on the decline. It began in December and the market reports already indicate advancing prices for the products of the refineries. The quantity of oil stored in the ground cannot be determined.

"David White, formerly Chief Geologist of the Geological Survey, testifying before the Public Land Committee of the United States Senate declared that while it was necessarily more of a prophecy than an estimate, he was doubtful if the Navy could go five years longer with constantly increasing consumption from domestic production. Other sources of supply must be drawn upon, he said, either from irregularly increasing foreign fields or from oil shale. Mr. White is a recognized authority on oil geology. He is careful and conservative in his utterances and does not seek notoriety through spectacular statements. What he has to say may be given serious consideration. And, when the time comes that we shall have to depend on the oil shales for our supply, consumers will see the price of refined oils take a jump in comparison with which the advances in anthracite during the last 10 years will appear insignificant.

"The reserves of anthracite are fairly well known, as also the fact that at the present rate of production the supply will last for from 60 to 100 years.

"Is the use of oil desirable? In a large factory, hotel or office building, where oil is used for fuel the odor given off by the oil can be largely confined to the boiler room, though a careless tender, by feeding the oil too rapidly to the burner, can fill the surroundings with greasy fumes that stick wherever they touch, but in a residence even of considerable dimensions the odor is practically inescapable. The supply of air must be delicately adjusted to the supply of oil or imperfect combustion results, prodncing, if the air supply be insufficient, an oily smoke that will settle down over and through the house with an effect upon walls, hangings, clothes and furniture which may be readily imagined. The oil burning equipment that does not produce these results is indeed perfect.

Stress One Case

"The following letter from a sales agent to the president of a coal company in Boston reports the unfortunate experience of one oil-consuming householder:

One of our customers, who lives in Brookline, put an oil burner into his home, in a house that ordinarily burns about 30 tons of anthracite coal per year. Everything was running satisfactorily with the oil until about the middle of December, when he called us on the telephone, and wanted a load of coal sent out to his house immediately.

He ordered the oil heater taken out. He says, that upon arriving home one night about 12 o'clock, the oil heater was burning. Then about 3 o'clock, on hearing one of the children cry, he had to get up, and the house was literally covered with oil and soot. He went into the basement, where he found one of the oil burners burning, and the other one entirely out. The result is that the house was saturated from top to bottom. It was necessary, to not only remove the curtains, but they had to be burned up. It was also necessary to have a gang of men out there wiping the walls, and the carpets, and so forth, have had to be sent out and cleansed.

They cannot collect any insurance because they claim that there was no fire. In this particular case, the loss has cost him about $7,000. The only satisfaction they can receive from the oil people is that they cannot account for the occurrence, and that they never heard of a case like it before.

You asked for this information, and I am glad to pass on it, and will be glad to introduce you to the gentleman in question, if you so desire.

Cannot Be Improved

"Oil firing generally is by numerous jets which concentrate the heat, causing damage to boiler tubes when the water forms scale. The sulphur content of fuel oil is usually high, Mexican varieties running as high as 3½ per cent. Sulphur fumes cause speedy deterioration of boiler tubes and fittings, and a case has been reported of a manufacturing plant in Rhode Island which was obliged to replace 1,500 boiler tubes one year after oil burning equipment had been installed.

"The heat from an anthracite fuel bed is diffused and causes a minimum of injury to boiler tubes when the water deposits scale in the tubes. Anthracite is low in sulphur and consequently does a minimum of injury to metal surfaces.

"In fact, safety, economy, practicability and desirability, all, in the long run, point to anthracite as the fuel for domestic heating."

The oil burner people cannot well ignore propaganda of this character, and the time to attempt to counteract it is during the coming summer, which finds a different situation from that which has previously existed as regards some of the relationships of oil and coal. This should be seriously considered at the convention of the American Association of Oil Burner Manufacturers, scheduled to meet at the Edgewater Beach Hotel, Chicago, April 1, 2 and 3.

NO EVIDENCE OF ANY MOVEMENT FOR RETURN OF COAL BURNING SHIPS

By L. M. Fanning

Despite the higher prices obtaining this year for fuel oil, there has been little conversion of shipping back to coal fuel, some newspaper accounts to the contrary notwithstanding. Reports of at least one steamship line returning to coal burning ships and of a change in shipping board fuel policy have appeared in the newspapers and have been made much of in coal circles. Coal journals and associations have widely circulated propaganda of this nature.

Not long ago announcement appeared in the newspapers that some eight vessels of the Moore & McCormack Co. of New York would be converted from oil burning to coal. Bunker fuel oil prices represented a higher level than last year, while coal was plentiful and soft, and it was stated that a considerable saving would be effected, justifying the conversion of the company's fleet.

Investigation brings out that around the time this information appeared in the press the company was negotiating its fuel oil contracts for this year, and it is possible the stories were inspired by a desire on the part of the company to get a better price for fuel oil. At any rate, it is learned that these vessels continue in service as fuel oil burners, the company having gone through with fuel oil contracts at the higher prices obtaining. Last year heavy bunker oil was selling around $1.50 a bbl. and is now being contracted at $1.80.

Government Ships

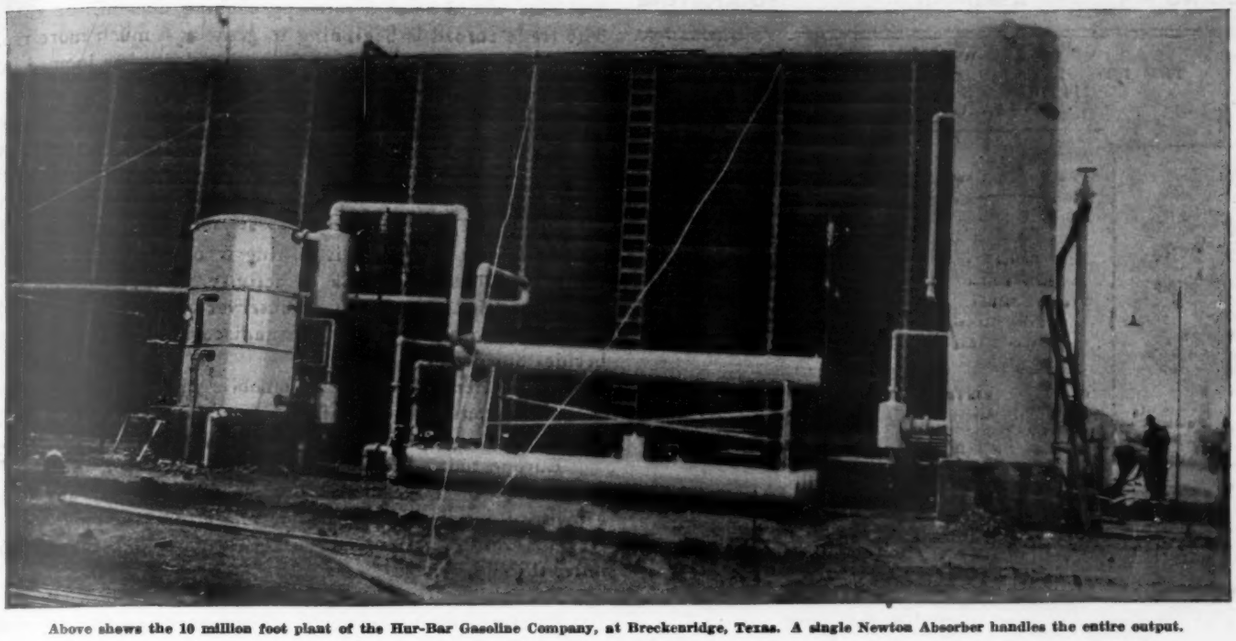
It was recently announced in the newspapers that the use of four coal burning ships in place of oil burners on the Baltimore line of the Emergency Fleet Corp. had been approved by President L. C. Palmer, in accordance with recommendations of R. T. Merrill, director of the Baltimore district of the corporation. This approval, it was stated, was given on the basis of a maximum estimate of $100,000 as the cost of reconditioning the ships, which for several years have been in the "laid up" fleet. The coal burners would be taken to New York repair yards soon where bids on the work would be secured.

According to this report, the substitution of coal for oil represented a distinct change in policy and "has been forced because of the big fuel saving to be had from the use of coal. Government engineers estimate the entire cost of placing the coal burners in spot condition will be recovered in less than 18 months through saving in fuel.

The report stated further that it is predicted several more oil burners will be retired from the Baltimore line in the near future and "it is likely that consideration will be given to the increased use of coal burners on the three New York lines of the corporation." The ships of the Baltimore line operate to United Kingdom ports, and, it was stated, that when the four additional coal burners are put in shape there will be 11 coal burned on this line as against 10 oil burners.

Latest information obtainable from the United States Shipping Board is that

(Continued on Page 142)



Above shows the 10 million foot plant of the Hur-Bar Gasoline Company, at Breckenridge, Texas. A single Newton Absorber handles the entire output.

THIS PLANT LOADED IN CARS 100%

Charcoal Tests for the Month of February

A single Newton Absorber, at the Hur-Bar Gasoline Company's Breckenridge, Texas, plant loaded 100% charcoal tests, in cars, for the month of February. This is by no means an unusual demonstration of the efficiency of Newton Absorbers.

Newton Absorbers are an improved foaming type, the most important feature being the re-circulation of the oil in the absorber. This gives the effect of circulating about 10 times the normal amount of oil and yet heating, cooling, and pumping about *15 gallons of oil* to each gallon of gasoline produced.

Our complete plants are as efficient as the absorber. We design and manufacture to meet your particular requirements and guarantee to produce 100% of a charcoal test. Newton Absorption Plants represent a lower investment, higher efficiency, greater salvage value and less operating expense. It will pay you to inquire for further details about our equipment.

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Transportation Building,
Los Angeles, Calif.

Hurley Bros.
Kennedy Bldg.,
Tulsa, Okla.

Tom McGuire
First Nat'l Bank Bldg.,
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WORLD WAITING FOR MOTORIZATION

Transportation is the basis of human progress. And oil is the basic factor in the transportation of today.

Through all history the nations that were most advanced in transportation led the vanguard of civilization. In the days before the railroad it was the nations that controlled the shipping routes. Since the coming of the locomotive national prosperity has been a reflection of the expansion of transportation facilities.

It has been seen again in the marvelous progress of the American people since the introduction of the automobile. When we consider, 87 per cent of the world's automobiles are in the United States and the work of putting the world on wheels has only just begun. We have demonstrated to the world at large that the automobile has proved itself a national necessity, a means of progress, promoting health, happiness, and at the same time advancing our financial welfare by increasing our productive capacity and therefore our ability to earn.

Originally accepted hesitatingly as a wonderful toy America has proved the automobile from every angle as a practical and essential institution.

The benefits accruing to the nation are incalculable. Good roads increase land values; land values increase taxes, which in turn enrich communities; easy transportation brings the city and the country into close relationship; facilities for education are improved through easier transportation; markets are enlarged by widening distribution, increasing consumption and thereby the comfort and convenience of the people.

As a result, physical, financial, intellectual and all other standards of living are elevated.

When we view all these enormous advantages which accrue to the individual, to the state and nation, it is manifest that the automobile as an agent must of necessity spread all over the civilized world. Each machine will pay for itself out of itself through the benefits afforded its owner.

With the motor car is included the autobus, the truck, the tractor, and, in increasing measure, the airplane. Nothing can stop their progress around the world.

A movement is now on foot in the automobile industry to form a strong financing body to take care of foreign sales. Far-seeing men in the automotive field have figured that by ten years from now foreign countries will be taking one-fourth of the motor vehicles made in America.

This would be at a rate approaching one million cars a year. The trade abroad is beginning to grow at a much more rapid pace than in the past. South America particularly has loomed into view as a lucrative field.

There may be a question as to what proportion the American manufacturers will be able to supply in face of European competition in motor car building but, whether of American or other make, there is no question in the mind of any rational thinking man that the world will be supplied in a reasonably short time in the future.

And when the world is cutting in on petroleum stocks the oil industry will see the peak of activity. Real problems of supply will then arise. The great oil reserves of South America, Mexico, Russia, Persia and others yet undiscovered will be drawn upon besides our own.

To the demands of the automobile will be added the increased volume of consumption of fuel oil on the seas as well as upon the land, and of aviation fuel in the air.

Europe today is criss-crossed by regular air routes from capital to capital. Here in America we have scarcely any idea of the growth of aerial travel abroad. Where in 1919 some 2,585 persons traveled 269,000 miles last year 62,000 persons traveled 5,000,000 miles through the air.

Fokker, the Dutch airplane builder, says there are today over 200,000 airplanes in the world. Two years ago the reported aerial mileage for all classes of planes totaled 20,110,700 miles. Last year it was 8,500,000 miles more.

The French are building planes for a Franco-Brazilian air service, by plane to Dakar, Africa, thence by boat to Pernambuco and by air to Buenos Aires, Rio Janerio and other South American cities. Air routes from Moscow to the Mediterranean, from England to India, from Paris across the Sahara, have been established.

Just at present the use of cargo planes is growing faster than passenger traffic but the one will follow the other. The supposed risk is decreasing with the perfecting of planes, knowledge of air conditions and experience in flying. Last year there was but one casualty to an average of one trip eight times around the world.

The gain in speed has been even more marvelous. Not quite 40 miles an hour was formerly the maximum attained. Now it has reached 278 miles an hour and even 500 miles an hour is deemed practicable.

What the automobile has done to bring Americans of all sections together as neighbors, the airplane is likely to do for the world at large. Therein lies the chief hope of human understanding that will lead to the ending of wars and the unification of mankind in the solution of our common problems.

Today our use of the air is limited, not so much by lack of knowledge or ability to fly, as by lack of appreciation of the practical advantages that will accrue from its development. In America even more than abroad aviation is still dependent largely upon government support. Probably our very satisfaction and success with the automobile dulls our interest in the airplane.

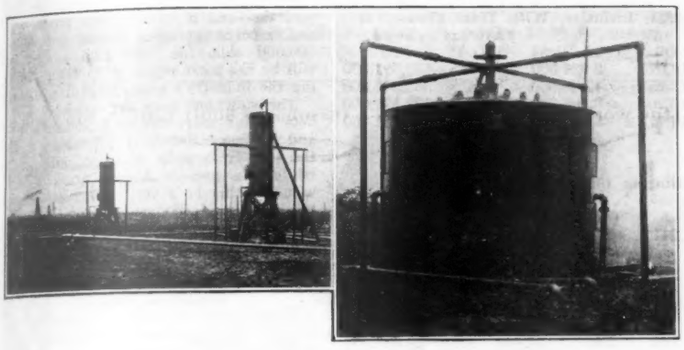
But, judging from the progress reported from abroad where commercial aviation is being developed in practically every country in Europe, Americans may awake one day to find our land transportation, vastly superior though it now is, surpassed by their use of the air.

Americans have distinguished themselves in single achievements in transcontinental and transoceanic flights, in flights round the world and in establishing new aerial records in many lines, but just as we allowed Europeas to lead in practical application of the discovery of the Wright brothers we have permitted them to lead us in the development of commercial use of the air.

No doubt the day is coming when America will arouse itself to the practical possibilities of aviation just as Europe is waking to the value of the automobile. We cannot measure the Europe since the war, maimed and bankrupt, with the Europe that is arising through the aid of the Dawes plan, a Europe that will give us our keenest competition and particularly in the development of transportation and industry through oil.

There is a wonderful period ahead for the petroleum industry. Consumption cannot possibly shrink and cannot stand still. It is certain to tax all obtainable resources, increasing year by year as the world becomes more and more motorized on land and sea and air.

PERFECTION VAPOR PRESSURE TANKS
WOOD, AND BOLTED STEEL TANKS



The illustration on the left shows how a Cromwell, Oklahoma, operator handled his gas problem. The pressure was unusually heavy, rated at 75 million cubic feet. Becoming convinced that one of our Perfection Vapor Pressure Flow Tanks was exactly what he needed, he disposed of his two gas traps and set our flow tank (right in picture). He is convinced that this move saved him thousands of dollars.

A Better and Cleaner Job of Gas Separation

WITH a Perfection Vapor Pressure tank, a gas trap is absolutely unnecessary.

This has been demonstrated time after time in every field where the oil is backed by heavy gas pressure.

In its dual duty the Perfection Vapor Pressure Flow tank begins immediately to save you money on installation.

It will handle wells making oil and gas in any quantity—big or little, it makes no difference—separates the gas and oil completely and makes available for lease fuel any quantity of gas you want for any purpose.

It's feasible as has been demonstrated time after time to send the remainder of the gas or any part of it to the nearest gasoline plant where you will get the regular market price.

Built right of best rust-resisting copper alloy steel, extra well braced with stays and struts to more properly withstand pressure and vacuum, provided with fool-proof valves and regulators, the Perfection Vapor Pressure Flow tank is the last word in mechanical excellence.

A visit to any one of our scores of installations, can't help but convince you.

Black Sivalls & Bryson
INC.

BARTLESVILLE ~ OKLAHOMA

Branch offices in all principal active fields

The Producer's Opportunity in 1925

Situation Most Promising in Several Years, the Result of Slow Cumulative Changes. Estimates for Coming Twelve Months

Without any concerted effort on the part of the producers of crude oil, the general situation of the entire industry has slowly worked around until today the producers have a genuine opportunity to "come into their own."

In 1924 we produced about 18,000,000 bbls. less oil than in 1923, and at the same time imported 4,300,000 bbls. less. In other words, our total "supply" was over 22,000,000 bbls. less than in 1923.

At the same time that our supply of crude oil was "turning the corner" and starting downward, our demand was steadily increasing, hence the years 1923 and 1924 have seen the producing situation swing slowly around into the most promising position it has held for several years.

As between the heaviest stocks that we have ever carried into a new year and the fact that demand is now running ahead of supply, the present advances in crude prices must be taken as definite proof that the present shortage in current supply is more potent in pushing prices up than heavy stocks are in keeping them down.

With Mexican imports starting downward in 1923, and with our own production starting downward in 1924, the situation has completely reversed itself—and thereby created an unusual opportunity for the producers of crude oil.

In the present situation two facts are outstanding. The low crude prices that have prevailed for the last few years have been due to constantly growing stocks and a current supply largely in excess of current demand. Second, the present advances, and others to come, are obviously due to the operation of the same law of supply and demand, but with stocks that were stationary a few months ago and that are today being slowly reduced.

Diminishing Supply

The condition of high stocks and excess supply that has existed for several years has slowly worked around to at least temporarily diminishing stocks and insufficient current supply.

Accepting the present situation as the net result of a two-year swing in which waning Mexican production was the large factor in 1923 and our own production the large factor in 1924, it should follow that present prices and forthcoming advances should "hold" until the general result of the 1925 drilling campaign can be reasonably well determined.

It has taken many months for the industry to work around into its present position which justifies higher prices for crude oil—and it should take at least a few months for the situation to work out to the point that we can be reasonably certain that in 1925 our current supply will be less than our current demand and stocks slowly reduced—or that we will make 1925 the seventh successive year that we have increased our crude oil in storage.

In the following tabulation the year 1925 has been estimated for the purpose of showing the net result of a possible situation.

Year	Production Plus Imports	Consumption Plus Exports	Stock Dec. 31
1921	597,000,000	535,000,000	169,000,000
1922	685,000,000	602,000,000	252,000,000
1923	814,000,000	732,000,000	335,000,000
1924	792,000,000	774,000,000	353,000,000
1925*	770,000,000	820,000,000	302,000,000

*Estimated.

On January 1, 1921, the price of Mid-Continent oil was $3.50 a barrel and the total pipe line and tank farm storage of the United States was 107,000,000 bbls.

In the intervening four years the average price of all of the oil of the United States, at the well, was about $1.57 a barrel—and on December 31, 1924, the total pipe line and tank farm storage had increased to over 352,000,000 bbls.

Table 1—Results of Drilling, 1921 to 1924, Inclusive, With Total Production

Year—	Ttl. Drilled	Dry	Gas	Oil	Initial Prod.	*Average I. D. P.	Total Prod.
1921	21,775	5,013	2,135	14,027	2,827,000	200	472,391,000
1922	24,685	5,329	2,011	17,288	4,266,000	244	563,372,000
1923	24,438	5,883	2,349	16,206	6,105,000	371	738,877,000
1924	21,894	4,950	2,173	14,771	3,255,491	221	720,731,000

*Average initial daily production.

Table 2—Results of Drilling in 1924, by Areas

Area	Total Wells	Dry	Gas	Oil	Initial D. P.	Aved. I.D.P.	Total Production
East of Mississippi	7,379	1,321	1,241	4,817	63,000	11	38,112,000
Mid-Continent—							
Kansas	1,125	396	70	650	92,000	142	29,671,551
Oklahoma	4,814	1,306	468	3,038	1,212,000	399	176,206,397
Texas	4,666	1,607	138	2,879	954,000	332	135,361,378
Arkansas	1,385	184	49	1,152	206,000	179	48,167,912
Louisiana	423	113	164	146	67,000	458	20,638,051
Total	12,413	3,608	898	7,865	2,531,000	322	410,045,289
Rocky Mountain	864	112	34	718	152,000	212	42,510,516
California	1,238	...	...	1,238	509,000	411	230,063,117
Grand Total	21,894	4,950	2,173	14,771	3,255,000	221	720,731,222

Counting Mexican imports as a part of our available supply of crude oil, there was hardly a month during this 4-year period when our current supply (domestic production plus imports) did not exceed our current demand—and as a natural result our storage climbed slowly from 107,000,000 bbls. to 353,000,000 bbls.

Situation Reversing

However, during the last half of this 4-year period, the pendulum started to swing in the other direction. First, Mexican imports dropped off 45,000,000 bbls. in 1923 and over 4,000,000 in 1924. Then our domestic production dropped 18,000,000 bbls. in 1924.

The net result of the storage situation during this period was that in 1921 we added over 62,000,000 bbls. to storage—in 1922 we added 83,000,000 bbls.—in 1923 another 83,000,000 bbls.—but by the end of 1924 the situation had reversed itself far enough that we added only 18,000,000 bbls.

If in this tabulation we take the column headed "consumption plus exports" we find that the normal increase in our domestic and export requirements should bring our total demand for 1925 up to about 820,000,000 bbls. To offset this we would have a current supply from our domestic production and imports of say 770,000,000 bbls.— or a shortage of 50,000,000 bbls., which would be drawn from stock thereby reducing it to about 300,000,000 bbls. on December 31, 1925.

From a purely production standpoint such a condition would put the crude oil end of the industry in a strong statistical position—and if our domestic production and imports aggregate around even 800,000,000 bbls. for 1925 that one thing will be the most powerful factor in solving the industry's most difficult problem.

The slow but sure expansion of markets is far more definitely determinable and far more definitely dependable than the current supply of crude oil. And while the present Conservation Board will probably be a very constructive factor in helping to "conservationally" adjust supply to demand, it is altogether probable that as the industry slowly moves "out of the woods" it will do so very largely "under its own power."

Results of Drilling

There could be no better proof of the almost insurmountable obstacles surrounding any program for conservation through the prevention of overproduction than a study of the results of drilling as shown in Table 1. In 1921 we drilled 14,027 wells and produced 472,000,000 bbls. of oil. The next year 17,288 wells were drilled and 563,000,000 bbls. produced—3,261 more wells and 91,000,000 more bbls. In 1923 we drilled 16,206 wells and produced 738,000,000 bbls.—1,082 fewer wells and 175,000,000 bbls. more oil. Last year we drilled 14,771 wells and produced 720,000,000 bbls. of oil—1,435 fewer wells and 18,000,000 fewer barrels.

In January, 1923, no human being could have anticipated that the drilling of 1,082 fewer wells than in 1922 would result in an increase of 175,000,000 bbls. in production.

Even though last year's imports of Mexican oil were almost 50,000,000 bbls. less than in 1922 and our own production 18,000,000 bbls. less than in 1923, it does not follow that we will not have ample supplies of gasoline—for several years to come. In 1922 our demand (domestic consumption plus exports) totaled slightly less than 6,000,000,000 gallons. In 1923 the demand was just over 7,500,000,000 gallons. In 1924 it was about 8,900,000,000 gallons and in 1925 it will run around 10,000,000,000 gallons. In 1923 our gasoline demand increased 1,500,000,000 gallons over the preceding year. In 1924 it increased about 1,400,000,000 gallons over the preceding year. And if, in 1925, it increases 1,100,000,000 gallons over 1924 it will have passed the 10,000,000,000-gallon-a-year mark.

We are today carrying more than 1,000,000,000 gallons of gasoline in storage. On January 1 there were 352,000,000 bbls. of crude oil in pipe lines and tank farms and about 40,000,000 bbls. at refineries, a total of close to 400,000,000 bbls.

Practically all of the crude run to stills at the present time is "current production"—and the 400,000,000 bbls. in storage has been there all the way from a few weeks to 10 years. Needless to say no figures are available to the public as to the probable gasoline content of this stored oil, although it is obvious that the average available recovery is substantially less than that from our current production.

Gasoline Content of Stocks

And while the shadow of huge reserves of "oil in storage" has lain dark across the pathway toward higher prices for current production the fact remains that 1,000,000 bbls. of oil of the average quality now in storage is very substantially lower than 1,000,000 bbls. of current production. And it is also obvious that the 400,000,000 bbls. of oil in storage on January 1, 1925 was by no means the "gasoline producing" equivalent by the fractionation process of a like quantity of the oil that will be produced during the early months of 1925.

Each year our refiners are getting

(Continued on Page 140)

FEW OSAGE LEASES ATTRACTIVE TO OIL MEN AT RECENT SALE

That the oil industry considers Osage County a field with more past than future was very clearly demonstrated Wednesday, March 18, when 351 tracts were put up for sale to the highest bidders and of the whole only 79 were considered as having any possibility for the production of oil and of the 79 tracts bought, only 23 cost over $1,000 each; only eight brought $5,000 or more, and only two were bid above $100,000. The highest-priced tract went to the Prairie Oil & Gas Co. at $300,000 and next to this was one on which $216,000 was realized. One tract in the Burbank area with producing acreage on three sides brought only $35,000 while two Burbank pieces each of which has production on two sides could only scare up bids of $25,000 and $5,200 respectively.

The whole sale brought to the Indians a total of $671,650.

Not since the sale held on September 29, 1913, when 10,132 acres brought $498,182.58 has so small a total sum been realized from a sale of Osage leases. Every sale in the intervening 11½ years has seen a total of over $1,000,000, while all but 6 sales out of 22 held in the 11½ years resulted in totals from $2,000,000 to $14,193,800 at the sale on March 18 and 19, 1924, when oil men lost all their sense of values.

The six Burbank leases sold at Wednesday's sale brought a total of $578,000 or an average of about $612 an acre, which seems to be a pretty stiff price, especially in view of the fact that it is edge stuff and that 100,000,000 bbls. of crude has been taken from the field. Burbank acreage up to the time of this last sale cost on an average a little over $2,800 an acre, ranging from $3.13 in the early sales when Burbank was a wildcat country pp to $12,437 an acre paid for one lease early in 1924. It is worthy of note to say that at least one lease cost $3.13 an acre is expected to produce more oil than the one that costs $12,431 an acre.

From the first sale to the most recent one an average of $151 per acre has been paid for Osage leases. At last Wednesday's sale an average of about $55 an acre was paid.

The leases sold had a total acreage of 12,215.71, which was less than one-fourth of the 55,227.98 acres offered.

On the east side 63 tracts out of a total of 326 offered, brought $68,500. The leases sold totaled 9,745.25 acres, making an average selling price of $7.03 per acre. A majority of the tracts brought the minimum bid of $500. The only active bidding was for tract 251, northeast quarter of Section 13-24-8, which was finally purchased by The Texas Co. for $20.500. It has Wilcox sand possibilities that made it attractive.

On the west side, all but nine of the 25 tracts offered were sold. The 16 tracts consisting of 2,470.46 acres brought $603,150, an average of $244.19 per acre.

Several companies bid for tract 348, northwest quarter of Section 12-27-5 and

(Continued on Page 138)

Correction

This advertisement appeared on page 7 of last week's issue, March 19, reading, through a typographical error, "No charge will exceed $5.00 providing the damage is due to wear and tear." This should have read, "No charge will exceed $6.00, as it appears below.

WICO

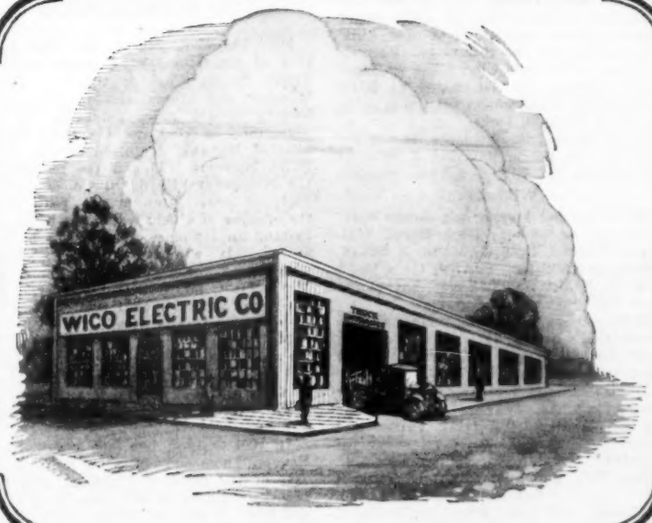
Tulsa Factory Branch Service

The Wico Centralized Service is recognized as the biggest thing ever done in replacement and maintenance service.

It is eliminating costly delays, assuring a two day service to practically all parts of the Mid-Continent Fields.

It means that in the case of a breakdown of a Wico Magneto, a call to our branch at Tulsa will start a complete new Magneto immediately to the scene of the trouble. You ship the old magneto to Tulsa. We rebuild it and simply charge you for such repairs. No charge will exceed $6.00 providing the damage is due to wear and tear.

Wire or phone the Wico Branch at Tulsa immediately any trouble arises. The branch is factory equipped to take care of all demands. Use our Tulsa Service.



The Wico Branch at Tulsa

THE WICO ELECTRIC CO. SPRINGFIELD, MASS. U.S.A.

Late News From the Fields

OKLAHOMA

The Gypsy Oil Co.'s deep test in the Cromwell Field, No. 6 Hale, C SW SE NE, Section 9-10-8, had a hole full of water in sand at 3,980-90 feet. The Shaffer Oil & Refining Co.'s No. 1 Little, C SW NW NE, Section 10-10-8, drilled into water at 4,141 feet in the Wilcox sand. It had a good show of oil, but had been held up for some weeks with casing trouble.

The Southwestern Petroleum Co.'s No. 1, C NW NW SE, Section 3-10-8, which topped the sand at 3,387 feet, made 920 bbls. in 24 hours at a total depth of 3,447 feet.

The Wentz Oil Corp.'s No. 50 McKee, C NW SE SW, Section 34-25-1w, in the Tonwaka Field, was given a 30-quart shot at 4,260-90 feet and increased the production of the well from 60 bbls. a day to 167 bbls. the first hour and 200 bbls. the second hour.

Cromwell Production

Daily average production of the Cromwell Field as of the week ended March 18 was as follows:

Company—	Wells	Bbls.
Amerada Petroleum Corp.	10	708
Berry Petroleum Co.	1	35
Burke-Greis Oil Co.	4	229
Carter Oil Co. and Gardner Petroleum Co.	6	48
Carter Oil Co.	37	2,199
Central National Petroleum Co.	8	975
Continental Oil Co.	1	44
Mid-Continent Petroleum Corp.	32	2,397
Empire Gas & Fuel Co.	4	166
Gilliland Oil Co.	8	91
Gypsy Oil Co.	43	2,391
Gypsy Oil Co. and Laurel Oil & Gas Co.	2	765
T. B. Hoffer et al	3	32
Holmes & Jarvis	1	5
Houston Oil Co.	2	510
Independent Oil & Gas Co.	3	40
Kingwood Oil Co. and Sinclair Oil & Gas Co.	4	82
McMan Oil Co.	11	581
Mid-Kansas Oil & Gas Co.	4	165
Prairie Oil & Gas Co.	6	309
Pure Oil Co.	10	186
Roxana Petroleum Corp.	21	2,434
Shaffer Oil & Ref. Co.	8	313
Sinclair Oil & Gas Co. and Gardner Petroleum Co.	1	449
Sinclair Oil & Gas Co. and Transcontinental Oil Co.	8	1,380
Sinclair Oil & Gas Co.	10	4,582
Snowden & McSweeney	3	488
Southwestern Petroleum Co.	15	6,351
Superior Oil Corp.	6	245
Tidal-Osage Oil Co.	12	1,629
H. F. Wilcox Oil & Gas Co.	7	98
Waite Phillips Co.	11	1,141
Total	302	31,068
Total previous week	302	33,665
Difference	0	2,597

Papoose Output

Daily average production of the Papoose-Gilcrease Field as of the week ended March 18 was as follows:

Company—	Wells	Bbls.
Amerada Petroleum Corp.	1	216
Arkansas Fuel Oil Co.	1	5
Berry Petroleum Co.	3	162
Carter Oil Co.	5	1,702
Mid-Continent Petroleum Corp.	12	4,322
Foster Investment Co.	5	378
Gilcrease Oil Co.	3	63
Gilcrease Oil Co. and Papoose Oil Co.	1	5
Gypsy Oil Co.	3	530
Independent Oil & Gas Co.	10	3,585
Independent Oil & Gas Co. and Atlantic Oil Producing Co.	1	265
Indian Territory Illuminating Oil Co. and Barnsdall Oil Corp.	3	996
Josey Oil Co.	2	517
Kingwood Oil Co.	10	1,446
Magnolia Petroleum Corp.	2	35
Continental Oil Co.	1	45
Papoose Oil Co.	13	969
Prairie Oil & Gas Co.	5	1,614
Phillips Petroleum Co.	1	385
Robinson and Amerada Petroleum Corp.	5	1,391
Skelly Oil Co.	1	161
T. B. Slick	23	4,169
T. B. Slick et al	5	1,413
T. B. Slick and Gypsy Oil Co.	3	1,582
Transcontinental Oil Co.	11	2,373
H. F. Wilcox Oil & Gas Co.	1	102
Total	131	28,431
Total previous week	126	30,262
Difference	5	1,831

KANSAS

The Wentz Oil Corp.'s No. 1 Thurlow, C NE SE, Section 17-33-3, northeast of the Rainbow Bend Field, Cowley County, had a good show of oil when deepened four feet after recovering the tools. The hole had a considerable amount of caving, and the tools were again lost.

The Trees Oil Co.'s No. 1 Estes, SE cor. SW NW, Section 12-32-6, Cowley County, had 500,000 feet of gas and a show of oil at 2,502-40 feet.

The J. A. Hull Co. had a hole full of water in No. 1, SE cor. Section 14-32-4, at 2,559 feet.

NORTH CENTRAL TEXAS

FORT WORTH, Tex., March 24.—There are two new wells showing up in Stephens County, neither yet listed as completions. Price and others' No. 5 Bruce is showing for a fairly good producer in the sand at 1,992 to 2,080 feet, probably the Strawn sand. According to latest reports from the field the well is swabbing at the rate of 300 bbls. daily.

The Simms Oil Co.'s No. 4 Decker also in Stephens County, which is also very likely producing from the Strawn formation, is making both oil and gas from sand at 2,159 feet. The well is credited with making 80 bbls. of oil and 2,500,000 feet of gas daily.

The derrick of the New Domain Oil Co.'s No. 1 Barton in Hutchinson County, Texas Panhandle, has been destroyed by fire. Drillers had been tied up on a fishing job for some time and the well was making about 50,0000,00 feet of gas daily when the fire occurred.

GULF COAST

HOUSTON, Tex., March 24.—In the Hull Pool, the Gulf Production Co.'s No. 12 Baldwin came in flowing 4,000 bbls. at 3,150 feet and its .No. 45 Phoenix, 1,000 bbls. at 3,275 feet. The gross estimated production of Coastal pools is now placed at 102,000 bbls.

In the Orange Pool the Gulf Production Co.'s No. 3 Hager-Moore is making 600 bbls. at 3,575 feet. The Kishi Development Co.'s No. 5 McGuire, a workover, is pumping 200 bbls.

In Jim Hogg County the Elliott & Texas Pacific Coal & Oil Co. joint No. 1 is a 10,000,000-foot gas well. Henne, Winch & Fariss' No. 7 Martinez is making 225 bbls. Buchanan and others set casing in No. 3 and have made a location for No. 4. The Big Bend Oil & Gas Co. is drilling No. 8.

In Webb County the Cintex Co.'s No. 7 is a 100-bbl. well. The United States Oil & Gas Co.'s No. 1 is credited with 20,000,000 feet of gas. Two deep tests are being drilled in the Schott Pool. The Carnahan Producing & Refining Co. is drilling one below 2,820 feet. The Magnolia Petroleum Co. is drilling the second around 2,700 feet. In the Aviator Pool the Cintex is rigging No. 8, and the Wheatley Oil Co.'s No. 15. The latter company has a production of over 1,000 bbls. a day and has completed its own pipe line to Mirando City. The National Oil & Refining Co. set casing at 3,100 feet and the Witherspoon Oil Co. is drilling No. 1 at 2,420 feet.

In the Sour Lake Pool the Manor Oil Co.'s No. 74 fee is pumping 7 bbls. at 450 feet and No. 74½ is a 5-bbl. pumper

Wildcats

On or around known salt domes operations are as follows: High Island, Galveston County, Gulf Co.'s No. 2 Smith, drilling at 3,300 feet. Sun Oil Co.'s No. 2 B. & O., drilling at 3,315 feet. Patton Oil Co.'s No. 11 Darnan, rigging.

Boling Dome, Wharton County: The Texas Co.'s No. 1 Tyler is a location; Gulf No. 3 Felder, 3,770 feet; No. 1 Hackstett, drilling at 1,780 feet.

Henley Dome, Harris County: The Texas Co.'s No. 1 Warren, 2,705 feet; No. 2 Warren, 1,165 feet; Vattar and others are starting 6 miles west of Humble.

Big Hill, Jefferson County: Houston Oil Co.'s No. 1 Sun-Pipken, 370 feet; No. 5 Pipken, 700 feet; Paggi Co.'s No. 2 Wilson, south of China, 730 feet; The Texas Co.'s No. 2 Neches, drilling at 710 feet.

Barton Hill, Chambers County: S. J. Hindman's No. 1 Collier, drilling at 2,600 feet.

Stratton Ridge, Brazoria County: Stratton Ridge Oil Co.'s No. 18 Dannebaum, rigging; D. F. Bryan's No. 1 Chester, 3,318 feet; Gulf Co.'s No. 2 Dunsmar, drilling at 1,010 feet.

Shepherd Mott, Matagorda County: Marland Oil & Refining Co.'s No. 1 Murphy, 4,685 feet; Shepherd Oil Co.'s No. 1 Hawkins, drilling at 1,100 feet.

Prospective Domes

Fort Bend County: Rycade Petroleum Corp.'s No. 1 Meier, at 1,500 feet in salt water; No. 1 Nash, drilling at 3,090 feet; No. 2 Nash, drilling at 4,220 feet; Gulf Production Co.'s No. 3 Moore, drilling at 1,809 feet; Marland Oil & Refining Co.'s No. 1 Raab Lake, rigging.

Fish Pool, Brazoria County: Gulf Production Co.'s No. 1, drilling at 2,400 feet; No. 1 Burns, 2 miles west of Brazoria, at 2,370 feet.

Waller County: Humble Oil & Refining Co.'s No. 1 Ruskin, drilling.

Montgomery County: L. F. Sprague & Co., Hartford City 2¼ miles west of Willis, is rigging. Same people are riggin at Derden Bend, San Jacinto County.

Walker County: Gas Ridge Development Co.'s No. 2, drilling at 375 feet.

Refugio County: George Smith's No. 1 Heard is a rig.

Newton County; Humble Oil & Refining Co.'s No. 1 Brown, drilling.

Angelina County: Fred Heine, of Pittsburgh, Pa., No. 2 Henderson, drilling at 370 feet.

Southwest Counties

In Bexar County: Storey and others, in Somerset Field, drilling at 1,420 feet; Ballard & Underwood's No. 2, abandoned.

Medina County: Mid-Kansas Oil & Gas Co.'s No. 1, south of Dunlay, drilling at 820 feet; Kone and others' No. 1, drilling at 2,200 feet; Lampasses & Bisbee Oil Co.'s No. 1, drilling at 1,200 feet. California-Merna Oil Co.'s No. 1, drilling at 2,800 feet.

Caldwell County: Marland Oil & Refining Co. is rigging No. 1 Zoniller, near Brewster well, which is making 95 bbls. per day now. The location is 6 miles south of Lockhart.

McMullen County: Lightfoot and others' No. 5 Vern, drilling at 1,100 feet; Old Ocean Oil Co.'s No. 1 Brown, drilling at 1,120 feet.

Live Oak County: Pplateau Oil Co. s No. 2 Freeman, 40,000,000-foot gasser. Its No. 1 Patterson is drilling at 3,000 feet. Humble Oil & Refining Co.'s No. 1 Oltoloms is drilling at 2,430 feet; Steele and others' No. 1 testing gas sand at 1,465 feet, after plugging back from 2,510 feet.

Wilson County: Mahone and others are rigging No. 1 Green, 4 miles west of Floresville. Houck and others' No. 1 Garrett, 9 miles southwest of Floresville is drilling at 1,300 feet.

EAST CENTRAL TEXAS

MEXIA, Tex., March 23.—The location of the Humphreys Boyd Oil Co., Texas Pacific Coal & Oil Co., Penn, Windsor and others' test in Henderson County is 3½ miles northwest of the community of Tool and 4½ miles southwest of Mabank, a station on the T. & N. O. Railroad. This is the test which the Humphreys Boyd Oil Co. sought to postpone until later in the year when the opening of a field would not be as disturbing an influence as it might be this spring. It will be the most closely watched of the several tests along the Mexia fault, but it is not attracting the amount of attention that was given to the tests in the Bazette area.

Murchison & Fain have a derrick up for a test 100 feet from the west line and 200 feet from the north line of the south 60 acres of the J. O. Springer farm on the J. M. Gardner survey, in Henderson County.

In Hill County, Lee and others' No. 1 Rogers, Thomason survey, 3 miles southeast of the town of Hubbard, was last reported drilling in Woodbine sand at 1,436 feet. It got the Austin chalk at 799 to 1,020 feet.

The Magnolia Petroleum Co.'s No. 1 J. R. Stroud, 150 feet from the southwest corner of the J. R. Stroud farm, on the Peter Varella survey in Limestone County is shut down at 2,342 feet in Austin chalk. J. R. Stroud's No. 1 fee, on the same survey, is shut down at 2,421 feet. The Bains Creek Oil Co.'s No. 1 in the southeast corner of the Belle Arnett farm, Varella survey, was drilling at 2,850 feet. These several wells are in the old Groesbeck gas area about 4½ miles northeast of the town.

In the Currie district, Stroutman and others' No. 1 Bounds, was drilling at 3,100 feet. The Sun Oil Co.'s No. 1 Swink, was drilling at 2,800 feet.

In the Bazette district, Elliott & Nicolle's No. 1 Westbrook was at a depth of 3,210 feet, which was very low for Woodbine sand. It may be sent to the Edwards lime horizon.

The J. K. Hughes Development Co. has made several purchases of producing leases that are said to have cost it a total of $906,000. The John Hoosier properties in the Powell Field cost the Hughes Co. $675,000; purchases from Cranfill & Reynolds $106,0000 and from the Oxford Oil Co., $125,000. The J. K. Hughes Development Co. already had 16 producing wells in the Wortham Field producing about 8,500 bbls. a day, 3 in the Mexia Field, 12 in the Powell Field and 5 in the Currie Field. The recent purchases included 3 wells from the Oxford Oil Co., 3 wells from Cranfill & Reynolds and 12 from John Hoosier, giving the Hughes organization altogether 54 wells in the East Central Texas fields.

GOOD KENTUCKY WELL

BOWLING GREEN, Ky., March 24.—The Carter Oil Corp.'s No. 2 Huddleston-Payne in the northern extension of the Sulphur Creek district in Cumberland County, Kentucky, was deepened from 325 feet below the Pencil Cave to 388 feet below the Cave where it started oil at the rate of 120 bbls. It is now being put on the pump. It was drilled to a total depth of 971 feet, 916 feet below the Black shale. The Payne lease, owned by General Jackson Morris and General Ellerbe W. Carter, is north of the famous Coop lease of Raydure & Sons. Tools are now being moved back to No. 1 Huddleston-Payne, 400 feet from Raydures' Copp No. 2, which is a flowing well, and it will be drilled to the same depth as No. 2.

Raydure & Son are drilling their No. 2 Mrs. Coop to the Heard sand, expected to be found at around 980 feet. No. 2, brought in February 6, is still flowing 170 bbls. daily and up to March 12 had filled thirty-four 250-bbl. tanks. No. 3 Coop is making 75 bbls. daily.

At Bear Creek, Freeman & McCormick's No. 1 T. L. Bow is shut down at 430 feet on account of the heavy gas pressure encountered at that depth. The first Sunnybrook from 303 to 335 feet showed for 3 bbls. naturally. This test will be drilled down to the second Sunnybrook and if non-productive it will be plugged back to the first pay and shot. The owners were so encouraged with the showing made so far that they have ordered a complete lease equipment and made contract for the drilling of two more wells on the Bow place.

Pittsburgh parties are rigging up a test on the F. F. Smith farm on the Burkesville-Bear Creek road for pumping and if it comes up to expectations several more wells will be drilled. The F. F. Smith is three-fourths of a mile from the C. C. Smith Pool and about the same distance from the T. L. Bow well.

E. M. Treat & Co. is starting No. 6 on the Dickens lease at Modoc. Two wells on the Dickens farm have produced in the neighborhood of ninety 250-bbl. tanks of oil during the past year.

The Vedder Oil Co., Inc., is drilling No. 3 Tompkins, at Fannis Creek, at 16 feet. No. 1 brought in January 23 with an initial production of 5 bbls. per hour from the second Sunnybrook is holding up at 45 bbls. daily. This company has just placed an order for casing and supplies to be shipped immediately so that it can carry out its drilling campaign without any unnecessary delay. Locations have been staked out for four wells for immediate drilling.

At Neeley's Ferry, Wilcox Brothers are moving to No. 3 location on the Rainey tract. No. 1 was dry; No. 2 is only good for 1 bbl.

At Kettle Creek, the Young Oil Co. shot its No. 2 Coffee and according to reports it looks like it will make an excellent pumper. Tompkinsville parties

(Continued on Page 161)

North-Central Texas Field

By George R. Kelley

Eighty-eight completions bring in early 11,000 bbls. of new production. Archer County has 40 producers with 10,977 bbls. Illinda Oil Co. gets 2,265-bbl. well in Stephens County. Largest Archer County well was White Brothers' No. 4 Kunkel, 850 bbls. Lee Wilson's No. 1 Haygood, Young County, 735.

FORT WORTH, Tex., March 23.—An unmerciful wave of disappointment has been sweeping over north Texas operators this week—a disappointment that is truly hard to conceal.

Not only in this territory but nearly everywhere else oil men had expected another advance in crude prices before this time. They had been led to the conclusion that there would have been an advance weeks ago had it not been for the prospective outlook for increased production from the Bazette area in east central Texas. Bazette failed miserably. And then everybody started getting ready for the crude advance which they had reason to expect.

Patiently they waited for days and weeks, but it did not come. And now comes the unfavorable news that gasoline stocks are heavy and that petroleum shipments from California to the Atlantic Coast are unusually large. These shipments from California they believe are having the effect of depressing the Mid-Continent market, and tank wagon prices are being reduced in a number of instances.

But in the face of this disappointment, by far the majority of operators are optimistic and hopeful. They know that stocks of crude oil are not overly large and they know too that within 30 days the big gasoline season will begin to make itself felt over the southern part of the country and that within 60 days tourists the country over will be tuning up their motors and there will be a demand for gasoline that will sweep the country.

Busy Week

So north Texas operators have put in an unusually busy week, turning in a total of 88 completions and nearly 11,000 bbls. of new production. At this rate the fields would turn in a total of 342 completions and add approximately 44,000 bbls. of new production in a month's time, which is considered ahead of any month in 1924 in either completions or new production added. Last year's largest month in completions was 339 and the largest amount of production in any month during the year was 30,518 bbls.

Then it is plainly evident that optimism or something else has spurred north Texas operators on to a point of development which is far ahead of development at this time last year. Production for the week is showing a good gain and the production report shows production at this time is higher than it has been at any time in more than a year. Total daily average production this week is 143,541 bbls., against a total last week of 139,296 bbls. The gain for the week was 4,245 bbls.

Most of the producing areas showed increases in production over that of the previous week, only Burkburnett, Electra and Ranger recording any losses. Burkburnett lost 160 bbls., Electra lost 895 bbls., and Ranger recorded an insignificant decline of 2 bbls. Gains in Archer and Stephens counties and in the miscellaneous pools far more than offset these small declines. Archer County recorded an increase in average daily production of 1,658 bbls., Stephens County gained 490 bbls. and the miscellaneous pools recorded an increase. The increase in miscellaneous production came principally from gains in north Young County, Reagan County and from the South Vernon Pool in Wilbarger County.

Gain in Completions

During the week there were 88 completions recorded, 55 of which were producers, 31 dry holes, and two were gas wells. New production for the week amounted to 10,977 bbls. This record compares with 69 completions last week, 43 of which were producers and 26 were failures, with a total new production for the week amounting to 7,194 bbls. Thus it can be seen that the week gained 19 completions and 3,783 bbls. of new production over the previous week.

Archer County had a total of 40 completions this week, 27 being producers and 13 dry holes. New production in the county was 4,905 bbls. Wichita County recorded 10 new completions and a like number were also reported from both Wilbarger and Young counties. Of the 10 completions in Wichita County 9 were producers with 437 bbls. of flush production. Seven of the 10 ew wells in Wilbarger County were oil wells, making a new production of 1,495 bbls. Only 5 of the 10 completions in Young County were successful but new production from that area amounted to 1,430 bbls. New production for the week was boosted considerably by the completion of a big well in Stephens County, the Illinda Oil Co.'s well on the Walker-Caldwell lease, which is credited with 2,265 bbls. Stephens had only two completions one of which was a failure. Eastland County had four completions, two producers making a total of 55 bbls., one dry hole and one gas well making 13,000,000 feet of gas. Brown County had four completions, one producer making 50 bbls., and three failures. The wildcat districts accounted for eight completions, three producers making 340 bbls., of oil, one gas well making 1,250,000 feet and four failures.

Largest Producers

Aside from the one big completion in Stephens County the best new producers were in Archer and Young counties. The largest Archer well was White Brothers' No. 4 Kunkel, which is now listed as a completion making 850 bbls. In Young County, Lee Wilson's No. 1 Haygood is now completed and making 735 bbls. Both these counties accounted for a number of new wells of moderate production running as high as 200 and 300 bbls. There were no unusually large wells reported from Wilbarger County though there were four completions ranging in production from 200 to 300 bbls., daily.

There are several wells in the South Vernon Pool that are showing for good production that have not yet been completed. Among these is the Humble Oil & Refining Co.'s No. 6 Castlebury, estimated to be making 250 bbls. daily from a total depth of 1,311 feet. Staley and others' No. 3 Stephens in the same pool is flowing at the rate of 125 bbls. from sand at 1,274 to 1,314 feet, and the Winnipeg Oil Co.'s No. 5 Bond is showing for a good producer. This well swabbed 175 bbls. in 12 hours.

There are a large number of new producers in Archer County not yet listed as completions. The Atlantic Oil Producing Co.'s No. 1-C Parrish is estimated to be good for 100 bbls. at 1,565 feet; Franklin and others' No. 4-B Parrish, swabbed 135 bbls. in eight hours from the same sand topped at 1,558 feet and Waite Phillips' Nos. 9 and 10 on the Luke F. Wilson ranch, are in and making a combined production estimated at 150 bbls. from the sand topped at about 1,500 feet.

In south Archer County Harris and others have two new producers on the Stampfli lease, No. 4 being estimated at 150 bbls. at 1,355 to 1,366 feet and No. 1-B estimated to be making 60 bbls. from sand at 1,363 to 1,371 feet. The Humble Oil & Refining Co. is also completing two good wells on the Stampfli, Nos. 4 and 5, the first of which swabbed 80 bbls. in 12 hours and the other swabbed 85 bbls. in the same time.

Harmel Pool Extended

The Harmel Pool, south Archer, was extended both to the northeast and the southwest during the week by new producers. On the northeast Murchison and associates' No. 2 Echols, looks like a fine producer at 1,318 to 1,328 feet. It is reported swabbing at the rate of between 350 and 400 bbls. daily. The new well is 1,200 feet beyond other production in the pool. On the southwest an extension was effected through the bringing in of Shaw and others' No. 1 Rogers, estimated good for 200 bbls., from 1,310 to 1,324 feet.

There is another good well in close proximity to this area. It is the No. 4 Stampfli-Roberts, which is estimated to be making 200 bbls. from the sand at 1,300 feet.

In northern Young County Murchison and others have three new producers on the Schlegel lands which are not yet completed. They are Nos. 4, 5 and 6, which are estimated to be making 150, 400 and 300 bbls. respectively from the sand between 1,190 and 1,200 feet. The Simms Oil Co.'s No. 7-A Carpenter is swabbing at the rate of 500 bbls. a day from the sand at 1,040 feet.

In southern Palo Pinto County Moore & Snebold's No. 1 Stuart, which hit the pay at 1,650 feet last week and drilled to 1,676 feet has been swabbing for several days. It is swabbing from 35 to 40 bbls. These operators have 160 of this lease and have made the location for their No. 2. They expect to drill several wells on this quarter section.

For a consideration of $100,000 Atkinson & Sandifer have purchased the oil properties of the Pierce Oil Corp. southeast of Breckenridge in Stephens County. There are 11 producing wells on the lease of 1,000 acres. Equipment and material on the lease were included in the sale.

PRODUCTION REPORT
Week ending March 19th, 1925

Burkburnett		
Gulf Production Co.	685	
Humble Oil & Refining Co.	470	
Magnolia Petroleum Co.	2,800	
Panhandle Refining Co.	365	
Prairie Oil & Gas Co.	12	
Sinclair Oil & Gas Co.	55	
Sun Oil Co.	170	
The Texas Co.	535	
Texhoma Oil & Ref. Co.	440	
Miscellaneous	9,920	15,452
Electra		
Empire Gas & Fuel Co.	1,025	
Gulf Production Co.	957	
Humble Oil & Refining Co.	138	
Magnolia Petroleum Co.	3,820	
Panhandle Refining Co.	70	
The Texas Co.	3,710	
Texhoma Oil & Rfg. Co.	1,675	
Miscellaneous	5,271	16,666
Iowa Park		
Gulf Production Co.	40	
Humble Oil & Rfg. Co.	8	
Magnolia Petroleum Co.	635	
Panhandle Refining Co.	60	
Texhoma Oil & Rfg. Co.	75	
Miscellaneous	3,305	4,113
Petrolia		
Gulf Production Co.	40	
The Texas Co.	70	
Miscellaneous	300	410
Archer County		
Empire Gas & Fuel Co.	570	
Gulf Production Co.	3,535	
Humble Oil & Refining Co.	630	
Magnolia Petroleum Co.	655	
Panhandle Refining Co.	250	
Prairie Oil & Gas Co.	1,300	
Sun Oil Co.	368	
The Texas Co.	2,350	
Texhoma Oil & Refg. Co.	2,920	
Miscellaneous	30,540	42,948
Stephens County		
Empire Gas & Fuel Co.	80	
Gulf Production Co.	1,390	
Humble Oil & Refg. Co.	900	
Magnolia Petroleum Co.	690	
Mid-Kansas Oil & Gas Co.	1,735	
Prairie Oil & Gas Co.	820	
Sinclair Oil & Gas Co.	122	
Sun Oil Co.	240	
The Texas Co.	1,700	
Texas Pacific Coal & Oil Co.	980	
Miscellaneous	7,315	16,012
Ranger		
Gulf Production Co.	330	
Humble Oil & Refg. Co.	55	
Magnolia Petroleum Co.	605	
Mid-Kansas Oil & Gas Co.	215	
Prairie Oil & Gas Co.	485	
Sinclair Oil & Gas Co.	410	
Panhandle Refg. Co.	215	
The Texas Co.	250	
Texas Pacific Coal & Oil	860	
Miscellaneous	2,850	6,375
Moran		
Empire Gas & Fuel Co.	50	
The Texas Co.	125	
Texhoma Oil & Refg. Co.	125	
Miscellaneous	2,160	2,460
Young County		
Gulf Production Co.	365	
Humble Oil & Refg. Co.	105	
Mid-Kansas Oil & Gas	35	
Panhandle Refg. Co.	323	
Prairie Oil & Gas Co.	10	
Sinclair Oil & Gas Co.	425	
The Texas Co.	975	
Texhoma Oil & Fuel Co.	785	
Miscellaneous	4,410	7,333
Eastland-Comanche		
Humble Oil & Refg. Co.	195	
Magnolia Petroleum Co.	1,125	
Mid-Kansas Oil & Gas Co.	210	
Prairie Oil & Gas Co.	115	
Sinclair Oil & Gas Co.	30	
The Texas Co.	155	
Texas Pacific Coal & Oil Co.	105	
Miscellaneous	1,990	3,925
Miscellaneous		
Wilbarger County	5,315	
Montague County	115	
Jack County	37	
Palo Pinto County	645	
Brown County	1,115	
Coleman County	75	
Callahan County	3,316	
Mitchell County	1,655	
Reagan County	13,100	
Scurry County	45	
Carson County	2,165	
Hutchinson County	120	
Wheeler County	75	
Gray County	50	
Total		27,827
Total this week		143,541
Total last week		139,296
Gain		4,245

Wichita County

Bailey and others' No. 1 Kemp & Kemper, dry at 1,878 feet; Burkland and others' No. 3 Burnett, 12 bbls. at 826 feet; Fisher-Jennings Oil Co.'s No. 2 Burnett, 60 bbls. at 1,565 feet; Gardner and others' No. 4 Watkins, 35 bbls. at 1,776 feet; Kruger and others' No. 11 Allen & Kemp, 90 bbls. at 1,647 feet; Magnolia Petroleum Co.'s No. 11 Maer, 50 bbls. at 1,765 feet; No. 3 Watkins, 55 bbls. at 1,766 feet; Moore and others' No. 3 Burnett, 60 bbls. at 1,600 feet; Petroleum Producers' No. 12 Maer, 45 bbls. at 1,766 feet; Texhoma Oil & Refining Co.'s No. 1 Burnett, 30 bbls. oil and 10 bbls. water at 1,640 feet.

Wilbarger County

Dill Form Oil Co.'s No. 1 Dill junked at 2,530 feet; Hamilton and others' No. 1 Kesster, dry at 2,007 feet; Humble Oil & Refining Co.'s No. 7 Castlebury, 240 bbls. at 1,329 feet; No. 8 Castlebury, 200 bbls. at 1,312 feet; No. 9 Castlebury, 300 bbls. at 1,309 feet; Kolp and others' No. 2 Waggoner, 300 bbls. at 2,031 feet; McCamey and others' No. 11 Stephens, 40 bbls. at 1,340 feet; Murchison and others' No. 1 Green, dry at 1,025 feet; Staley and others' No. 2 Stephens, 285 bbls. at 1,318 feet; Independent Oil & Refining Co. (formerly Wells and others) No. 3 Waggoner, 130 bbls. at 1,297 feet.

Archer County

Dawson and others' No. 1 Powell, dry at 1,602 feet; Forgy and others' No. 1 Pearston, dry at 1,708 feet; Phillips and others' No. 8 Wilson, 20 bbls. at 1,528 feet; No. 9 Wilson, 75 bbls. at 1,518 feet; No. 10 Wilson, 45 bbls. at 1,525 feet; Riner and others' No. 16-B Wilson, 85 bbls. at 1,622 feet; Texhoma Oil & Refining Co.'s No. 1 White, dry at 1,620 feet; Young and others' No. 1 Matthews, dry at 1,400 feet; Atlantic Oil Producing Co.'s No. 1 Blewett, dry at 1,500 feet; Clark and others' No. 4 Echols, 175 bbls. at 1,318 feet; Conti-

nental Oil Co.'s No. 7 Harmel, 50 bbls. at 1,237 feet; Daniels and others' No. 4 Stampfli, 225 bbls. at 1,340 feet; Grisham and others' No. 1 Hayter, 25 bbls. at 1,342 feet; No. 2 Hayter, 35 bbls. at 1,346 feet; Grisham and others' No. 3 Hayter, 225 bbls. at 1,328 feet; Harvey and others' No. 2 Kunkel, 865 bbls. at 1,153 feet; Humble Oil & Refining Co.'s No. 1 Hayter, dry at 1,398 feet; No. 3 Stampfli, dry at 1,373 feet; Jewell and others' No. 1 Conner, dry at 1,358 feet; Magnolia Petroleum Co.'s No. 1 Lauster, dry at 1,884 feet; Marland Oil Co.'s No. 1 Ward, dry at 1,055 feet; McGee and others' No. 1 Richardson, 175 bbls. at 1,317 feet; Petroleum Producers' No. 12 Hausler, 150 bbls. at 1,143 feet; Shamrock Oil Co.'s No. 1-A Campbell Bank, 200 bbls. at 1,337 feet; No. 7-C Richardson, 150 bbls. at 1,301 feet; No. 12-C Richardson, 125 bbls. at 1,317 feet; Shaw and others' No. 2-B Hayter, dry at 1,343 feet; No. 7 Monohan, 150 bbls. at 1,325 feet; No. 8 Monohan, 80 bbls. at 1,332 feet; Sun Oil Co.'s No. 6 Green, 25 bbls. at 1,082 feet; Superior Oil Producing Co.'s No. 1 Kinder, dry at 1,402 feet; Texhoma Oil & Refining Co.'s No. 7 Harbison, 270 bbls. at 1,319 feet; Texhoma Oil & Refining Co.'s No. 8 Harbison, 350 bbls. at 1,314 feet; No. 9 Harbison, 125 bbls. at 1,329 feet; No. 1 Kunkel, dry at 1,302 feet; Underwood Drilling Co.'s No. 4 Rogers, 60 bbls. oil and 80 bbls. water at 1,282 feet; United Central Oil Co.'s No. 3 Rogers, 240 bbls. at 1,335 feet; White Brothers' No. 4 Kunkel, 850 bbls. at 1,157 feet; Wollet and others' No. 6 Griffin, 70 bbls. at 1,317 feet.

Young County

Atlantic Oil Producing Co.'s No. 1 Finch, dry at 1,302 feet; Camp Oil & Gas Co.'s No. 1 Benson, dry at 1,219 feet; Hinson and others' No. 1 Ribble, 30 bbls. at 3,002 feet; Knight and others' No. 1 Street, dry at 1,515 feet; Murchison and others' No. 2 Campbell, dry at 1,042 feet; No. 13 Gambrell, 125 bbls. at 1,224 feet; The Texas Co.'s No. 5 Gambrell, 240 bbls. at 1,222 feet; Texhoma Oil & Refining Co.'s No. 5 Gambrell, 300 bbls. at 1,227 feet; No. 6 Gambrell, dry at 1,235 feet; Wilson and others' No. 1 Haygood, 735 bbls. at 1,024 feet.

Stephens County

Illinda Oil Co.'s No. 4-A Walker-Caldwell, 2,265 bbls. with 10 per cent water at 3,295 feet; Texas Fidelity Oil Corp.'s No. 1 Ashmore, dry at 2,106 feet.

Eastland County

Lebaugh and others' No. 2 Holcomb, dry at 1,835 feet; Knight and others' No. 4 Underwood, 30 bbls. at 2,596 feet; Root and others' No. 1 Hazel, 13,000,000 feet of gas at 3,261 feet; Weaver Oil Corp.'s No. 1 Hatton, 25 bbls. at 3,385 feet.

Brown County

Canyon Oil & Gas Co.'s No. 7-A McDonough, dry at 1,348 feet; Mahlstedt Mook Oil Co.'s No. 3 Newton, 50 bbls. at 1,280 feet; Moore and others' No. 1 Chambers, dry at 1,470 feet.

Carson County

The Texas Co.'s No. 1 Burnett, 220 bbls. at 3,064 feet, drilled deeper from 3,018 feet.

Baylor County

Andrade and others' No. 1 Cockrell, dry at 1,657 feet; Maer and others' No. 1 Leathers, dry at 1,703 feet.

Clay County

Knox Finley Development Co.'s No. 4 Scott & Ramsdell, 15 bbls. at 1,143 feet.

Shackelford County

Hogan and others' No. 1 Elliott, 105 bbls. at 2,089 feet.

Palo Pinto County

Burton and others' No. 3 Strawn Coal Co., junked at 3,121 feet; Wickers and others' No. 1 Williams, 1,250,000 feet of gas at 3,225 feet.

Callahan County

Prewitt and others' No. 2 G. T. Crane, dry at 1,100 feet.

Archer County—Drilling

Humble Oil & Refining Co.'s No. 3 Orton is drilling at 1,789 feet; Panhandle Refining Co.'s No. 4 Orton at 1,465 feet; Atlantic Oil Production Co.'s No. 2-C Parrish at 730 feet; Barkley and others' No. 6 Wilson at 945 feet; Bridwell and others' No. 7 Wilson at 1,280 feet; Boggs and others' No. 1 Wilson at 1,520 feet; Burns and others' No. 1 Wilson at 1,240 feet; same company's No. 1 Parrish is reaming; Carter and others' No. 6-C White is setting casing at 1,600 feet; same company's No. 1 Wilson has oil show at 1,556 feet; Dale Oil Corp.'s No. 1 Wilmot is drilling at 930 feet; Empire Gas & Fuel Co.'s No. 3-A Wilson, at 910 feet; Jetter and others' No. 3 White is fishing at 200 feet; Norwood and others' No. 1 Carson is underreaming; Oasis Oil Co.'s No. 1 Wilson is drilling at 175 feet; Phillips and others' No. 1 Wilson at 1,015 feet; same company's No. 7 Wilson is rigging up to pump; Phillips Petroleum Co.'s No. 16 White is drilling at 1,560 feet; same company's No. 22-E White has an oil showing at 1,600 feet; Riner and others' No. 15-B Wilson is drilling at 725 feet; same company's No. 25-B Wilson is underreaming; Saunders and others' No. 1 Sprague is drilling at 1,625 feet; Simms Oil Co.'s No. 7 Parrish at 1,340 feet; Staley and others' No. 10-C Wilson at 1,320 feet; Thomas and others' No. 1 Parmenter at 430 feet; United Central Oil Corp.'s No. 1 Wilson is underreaming; Roher Oil Co.'s No. 2 Coffield is drilling at 660 feet; Comac Oil Co.'s No. 1 Seay at 590 feet; Crosslin and others' No. 1 Kreiter at 200 feet; Phillips and others' No. 1 Wolf at 500 feet; Rayzor and others' No. 1 Porter at 490 feet; Richardson Brothers' No. 1 Boone at 1,330 feet; Ross and others' No. 1 Seay is underreaming; Sun Oil Co.'s No. 9 Farmer is drilling at 940 feet; Young and others' No. 1 Abercrombie at 680 feet; British American Oil Co.'s No. 5 Rogers at 100 feet; same company's No. 6 Rogers at 730 feet; Bridwell and others' No. 2 Boren at 1,154 feet; Brunson and others' No. 1 Prideaux at 730 feet; Burton and others' No. 1 Jeske at 620 feet; Christie Brothers' No. 3 Campbell Bank at 100 feet; same company's No. 4 Campbell Bank at 100 feet; Clark and others' No. 2 Rogers at 1,030 feet; same company's No. 3 Rogers at 1,020 feet; Clark & Harbin's No. 6 Echols at 1,070 feet; Cook and others' No. 1 Campbell is coring a sand at 1,426 feet; Empire Gas & Fuel Co.'s No. 1 Carter has a showing of oil at 1,238 feet; Fred B. Foster Co.'s No. 1 Andrews at 1,340 feet; Gwynn and others' No. 3-A Rogers at 780 feet; No. 1-B Rogers at 1,022 feet; No. 2 Scruggs at 1,220 feet; Harris and others' No. 5 Stampfli is bailing at 1,372 feet; Humble Oil & Refining Co.'s No. 4 Ragle is making oil at 1,096 feet; No. 6 Stampfli is swabbing casing at 1,373 feet; No. 7 Stampfli is drilling at 965 feet; No. 8 Stampfli at 444 feet; No. 9 Stampfli at 207 feet; Magnolia Petroleum Co.'s No. 4 Rogers at 746 feet; No. 1 Stampfli will shoot at 1,370 to 1,380 feet; No. 4 Stampfli is preparing to drill in at 1,326 feet; No. 5 Stampfli is drilling at 680 feet; No. 6 Stampfli at 580 feet; McGee and others' No. 2 Richardson at 1,213 feet; McKnight and others' No. 1 O'Donnell at 840 feet; Murchison and others' No. 18 Griffin at 860 feet; No. 10-C Harmel at 700 feet; Petroleum Production Co.'s No. 1-B Hausler at 850 feet; Roxana Petroleum Corp.'s No. 3 Kunkel is cleaning out at 1,165 feet; Shamrock Oil Co.'s No. 1-B Campbell Bank is drilling at 1,309 feet; No. 13-C Richardson is setting casing at 1,300 feet; No. 16-C Richardson is setting casing at 1,328 feet; Shaw and others' No. 7-B Hayter is drilling at 940 feet; No. 10-A Monohan is swabbing casing at 1,319 feet; The Texas Co.'s No. 1 Boren is drilling at 200 feet; No. 20 Ragle at 150 feet; Texhoma Oil & Refining Co.'s No. 10 Harbison at 1,220 feet; No. 11 Harbison at 1,190 feet; No. 12 Harbison at 930 feet; No. 13 Harbison at 910 feet; No. 1 Morrison at 860 feet; United Central Oil Co.'s No. 4 Rogers is setting casing at 1,328 feet; No. 5 Rogers is drilling at 400 feet; White Brothers' No. 6 Kunkel is fishing at 1,123 feet; No. 7 Kunkel is drilling at 890 feet; Willis and others' No. 1 Greenway at 820 feet.

Young County—Drilling

Andrade and others' No. 1 Goase is drilling at 830 feet; Brian and others' No. 1 Vernon is fishing at 1,262 feet; Burns and others' No. 1 Mothes is drilling at 1,390 feet; Burton and others' No. 1 Weaver at 100 feet; Christie Brothers' No. 1 Rogers at 400 feet; Flowers' Brothers' No. 1 Farmer at 890 feet; Gardner and others' No. 1 Schlegel at 150 feet; Hinson and others' No. 1 Laquey at 300 feet; Humble Oil & Refining Co.'s No. 1 Campbell at 740 feet; No. 2 Schlegel at 1,051 feet No. 3 Schlegel is swabbing casing at 1,190 feet; No. 4 Schlegel is drilling at 700 feet; No. 6 Schlagel at 450 feet; Jenson and others' No. 1 Vernon at 680 feet; Lesh and others' No. 8 Kemp at 910 feet; Marland Oil Co.'s No. 1 Harrison at 3,050 feet; Mitcham and others' No. 1 Buster at 560 feet; Mooers and others' No. 1 Kunkel at 1,110 feet; Murchison and others' No. 7 Schlegel at 400 feet; No. 10 Schlegel at 300 feet; Muse and others' No. 2-A Schlegel at 450 feet; No. 1-B Schlegel at 540 feet; Panhandle Refining Co.'s No. 1 Van-Hamert is fishing at 930 feet; Reed and others' No. 1 Claud is drilling at 200 feet; Simms Oil Co.'s No. 8-A Carpenter at 350 feet; No. 2-B Carpenter at 930 feet; Street and others' No. 1 Finch at 530 feet; The Texas Co.'s No. 1 Carr at 860 feet; No. 7 Gambrell at 1,130 feet; No. 11 Gambrell at 912 feet; No. 1 Graham at 1,540 feet; Whitehead and others' No. 1 Belknap Coal Co. at 1,220 feet; Wilson and others' No. 2 Haygood at 530 feet; Wolf and others' No. 1 Haygood at 840 feet; Wurtz and others' No. 1 Wells at 1,280 feet.

Reagan County—Drilling

Big Lake Oil Co.'s No. 16 University is underreaming; No. 18 University is drilling at 2,610 feet; No. 19 University at 1,950 feet; No. 20 University at 1,865 feet; No. 21 University at 1,690 feet; No. 22 University is fishing at 580 feet; No. 23 University is drilling at 1,420 feet; No. 24 University at 2,120 feet; No. 24 University is setting casing at 1,050 feet; California Co.'s No. 1 University is drilling by casing at 3,480 feet; Cogdell and others' No. 1 University is fishing at 360 feet; Hoffman and others' No. 1 University is drilling at 2,020 feet; McCamey and others' No. 1 University at 510 feet; McGuire and others' No. 1 Merchant at 160 feet; Pilot Oil Corp.'s No. 1 University at 2,350 feet; Simms Oil Co.'s No. 1 Sawyer at 3,420 feet; Texon Oil & Land Co.'s No. 5 Group 1 University at 1,710 feet; No. 6 Group 1 University at 1,430 feet; No. 7 Group 1 University at 2,550 feet; No. 8 Group 1 University at 1,720 feet; No. 9 Group 1 University at 2,250 feet; No. 2 Group 2 University at 935 feet; No. 3 Group 2 University at 520 feet.

Brown County Drilling

Honea and others' No. 2 DeBusk is fishing at 2,345 feet; Lowe and others' No. 1 Williams is drilling at 692 feet; Mahlstedt Mook Oil Co.'s No. 5 Newton at 974 feet; Moore and others' No. 1 Gafford is spudding; Thomas and others' No. 1 Bohara is mudding off water at 2,410 feet.

Wichita County—Drilling

Petroleum Production Co.'s No. 4 Allen & Kemp is drilling at 800 feet; No. 13 Maer at 1,000 feet; Ryan Petroleum Co.'s No. 1 Hinson is fishing at 1,010 feet; No. 28 Nance is drilling at 1,292 feet; Section 2 Oil Co.'s No. 7 Burnett is fishing at 1,596 feet; Texhoma Oil & Refining Co.'s No. 3-B Burnett is cleaning out at 1,820 feet; Texhoma and others' No. 2-E Burnett is drilling at 1,442 feet; No. 1 Throckmorton is plugging back to 1,794 feet; Waller and others' No. 1 Waller is drilling at 1,650 feet.

Couch and others' No. 12 Donohoe is drilling at 1,315 feet; Magnolia Petroleum Co.'s No. 110 Reilly at 300 feet; No. 1 Weeth at 750 feet; No. 11 Beach cleaing out at 1,203 feet; Continental Oil Co.'s No. 6 Roller drilling at 1,000 feet; Atlantic Oil Production Co.'s No. 1 Burnett at 1,900 feet; Dale Oil Corp.'s No. 8 Jennings at 800 feet; Empire Gas & Fuel Co.'s No. 7 Pierce at 845 feet; Nos. 8 and 9 Pierce are spudding; Gardner and others' No. 5 Watkins is drilling at 1,400 feet; Hammond and others' No. 1 Waggoner at 1,750 feet; Hawkins and others' No. 6 Watkins at 1,750 feet; No. 1-B Watkins at 1,450 feet; Howell and others' No. 4 Burnett is spudding; No. 5 Burnett is drilling at 995 feet; Howell and others' No. 1 Burnett at 1,350 feet; Kruger and others' No. 12 Allen & Kemp at 1,200 feet; Magnolia Petroleum Co.'s No. 12 Douglas at 1,430 feet; No. 67 Honaker at 1,060 feet; No. 42 Rio Bravo is cleaning out at 1,585 feet; No. 43 Rio Bravo is underreaming; No. 4 Watkins at 420 feet; Moore and others' No. 4 Burnett at 1,400 feet; Perkins and others' No. 14 Burnett at 1,680 feet.

Wilbarger County—Drilling

Atlantic Oil Co. and others' No. 1 Parker is drilling at 2,290 feet; No. 1

(Continued on Page 176)

W. T. WAGGONER RANCH TO BE SCENE OF CONSIDERABLE WILDCAT DRILLING

By George R. Kelley

FORT WORTH, Tex., March 24.—If nothing happens to call a halt in wildcat operations in Wilbarger County, North Texas district, there will in all probability be more than 100 wildcat wells drilling in that area April 1, and present indications are that fully three-fourths of this number will be drilling on one property, that of the W. T. Waggoner ranch.

The main idea in this almost unequaled wildcatting campaign seems to be a connecting line between the Electra Field on the east and the South Vernon Pool on the west, and practically the whole of this territory that is coming in for exploration by the wildcatter is in the confines of the big Waggoner ranch.

It is said that the Waggoner interests have already made close to 100 contracts for test wells to be drilled on the property, and at the present time there are between 65 and 70 wells that are ready to start drilling, many of them on the Waggoner.

It is known that some operators regard the specifications of the Waggoner contract rather stringent, but so far as can be learned there are few, if any, who have refused to comply with the so-called stringent clauses of the contract. Originally and primarily the Waggoner interests are ranching interests and there is a rather general impression that they have always more or less resented the encroachment of the oil fields upon the vast ranges of western Texas. However, the Waggoners are now in the oil business, probably they were forced into it, and they could develop their own properties if they so elected.

Some of the Stipulations

But practically all of the oil companies seem to have taken a liking to the Waggoner ranch, especially that portion of it lying between Electra and South Vernon and they are all both large and small, signing on the dotted line. Customarily the operators are allowed 320 acres for a well and aside from the usual stipulations of a drilling contract the well must be drilled with cable tools and the test must be sunk to a depth of 2,000 feet unless commercial production is secured at a higher elevation. If any production is secured the Waggoner Refining Co. has the first call on the output of the leases, at the market price.

In all the territory lying between Electra and the South Vernon Field a distance of about 25 miles, there is a veritable forest of derricks springing up. But that is not all for the wildcatters are working out from the South Vernon Pool in every direction. Definite locations for wells to be drilled at once have been made as far west as 7 miles beyond the South Vernon Pool proper. On the south there are scattered locations and derricks being erected down to within a mile or two of the Baylor County line, while to the north they have crossed over

(Continued on Page 161)

There seems to be no limit short of complete conversion, to the percentage of gasoline that can be obtained in one throughput with the Dubbs Cracking Process

Universal Oil Products Company
Owners of the Dubbs Process
310 South Michigan Ave
Chicago Illinois

Gulf Coast Oil Operations

By P. L. McGreal

Completions in South Liberty Pool largely responsible for big increase in Gulf Coast production, gain there alone estimated at 10,000 bbls. daily. Increasing output salt water in that pool not surprising. Big wells in Hull Pool add to production there. South Liberty Pool extended half mile.

HOUSTON, Tex., March 23.—The South Liberty Pool firmly established itself as a factor in the Gulf Coast regions during the past week. It is now credited with a daily average gross production of 16,000 bbls. which will probably be increased this week. The pool was opened January 1, the discovery well of the Winifree Oil Co.'s No. 1 Pickett being on the northeast side of the salt mass. The first well got the sand at 3,420 feet and was credited with an initial production of 3,000 bbls. Until this past week all the production developed in the pool was grouped around the discovery well.

Early in the week the Gulf Production Co. completed No. 1 Vande Venter at 3,500 feet, making 4,000 bbls. per day of 22 gravity oil. It is one-half mile south of the group of wells, thus extending production in that direction. The Humble Oil & Refining Co.'s No. 1 Pickett, located 375 feet north of the discovery well was abandoned in shale at 3,780 feet. The producing area of the pool is now approximately one-half mile north and south and 500 feet east and west.

Other completions during the past week included F. M. Long's No. 1 Andrew, which came in credited with 3,000 bbls. at 3,657 feet; Mills Bennet's No. 1 Brown Reviere, credited with 3,000 bbls., located east of the group; The Humble Oil & Refining Co.'s No. 1 Harrison-Pickett, 1,500 bbls. original flow, and the Vacuum Oil Co.'s No. 2 Barrett, flowing 2,500 bbls. at 3,410 feet. This well sanded late in the week. The Gulf Production Co. set screen in No. 1 Barrett 6 acres, west of the discovery well and is bailing at 3,420 feet. Late in the week the Monarch Oil & Refining Co. (Peer Oil) test came in at 3,425 feet, flowing 3,000 bbls. through one-inch choke. It is 100 feet north of the discovery well and some operators estimate its potential production as high as 10,000 bbls.

Getting More Salt Water

Operators in the pool were given a scare during the week when the producing wells commenced to register increasing percentages of salt water. The Gulf Co.'s No. 1 Van de Venter dropped to 2,600 bbls. over night. That company is bailing No. 1 Speer at 3,100 feet. The Hofer Oil Co.'s No. 1 Pickett fell off from 1,500 to 1,000 bbls. and then quit flowing entirely. The Humble Oil & Refining Co.'s No. 1 Harrison-Pickett shows 10 per cent sediment and water. The Oxford Co.'s No. 1 Harrison dropped off to 600 bbls. F. M. Long's No. 1 Andrews is now making 1,000 bbls., 25 per cent sediment and water. Late in the week Mills Bennett's No. 1 Brown-Reviere was flowing 1,800 bbls. of fluid, 14 per cent b.s. and water. The Gulf Production Co.'s No. 1 Reviere, west of the original well is bailing at 3,400 feet. The Bashare Oil Co. worked over its No. 1 Pickett south of the discovery well and it is pumping 250 bbls.

The presence of salt water is not a new manifestation in the Gulf Coast pools. It is probable that the east and southeast sides of the dome will prove more uniform and therefore more prolific. This is the history of West Columbia, Hull, Humble and Vinton, as well as the smaller pools.

The pipe line companies have posted $2 for grade A and $1.75 for grade B in line with the other pools in the Coastal region.

It is very evident that the South Liberty district will witness much activity during the balance of the spring and for the summer months. The Humble Oil & Refining Co. has engaged 14 drilling rigs for locations other than those now drilling. The Gulf Production Co. has contracted for nine more rigs.

Drilling Operations

Wells drilling in the pool, together with locations are as follows at the close of the week: Bills Bennett's No. 4 Pickett rigging up; No. 5 drilling around 1,510 feet; No. 6 drilling around 2,020 feet; No. 7 drilling around 700 feet; No. 8 a location; No. 2 Reviere a location. The Humble Oil & Refining Co.'s No. 2 Reviere showing oil at 3,550 feet; No. 2 Chambers, a location No. 2 Pickett a derrick; No. 1-B Pickett drilling around 500 feet; No. 1-C Pickett a location No. 2-A Harrison a location. The Vacuum Oil Co.'s No. 2 Barrett drilling around 3,500 feet; No. 3 drilling around 3,400 feet; No. 4 drilling around 3,000 feet; No. 5 drilling around 1,900 feet; No. 1 Reviere, abandoned at 2,200 feet. The Bashara Oil Co.'s No. 2 Pickett drilling around 1,300 feet; No. 3 a location. The Peer Oil Corp.'s No. 1 Harrison drilling around 3,420 feet; No. 2 drilling around 3,510 feet; Nos. 3, 4, 5 and 6 locations; No. 2 Pickett a derrick. The Sun Oil Co.'s No. 1 Shade, drilling around 2,500 feet and Nos. 2 and 3 locations. Mrs. Esperson's No. 1 Baldwin, drilling around 2,750 feet. Oxford Oil Co.'s No. 2 Harrison, drilling around 3,300 feet; No. 3 drilling at 2,180 feet; No. 4 and 5 derricks. The Texas Co.'s No. 1 Moore, drilling at 1,650 feet. The Gulf Co.'s No. 1 John Hamman, bailing at 3,260 feet; No. 1-A Williams and others' rigging up; No. 2 a derrick; No. 3 a location; No. 4 a derrick; No. 1 W. E. Orgain, drilling 400 feet; No. 2 and 3 locations; No. 1 Shade building derrick; No. 2 a location.

Big Creek Operations

At Big Creek, The Texas Co.'s No. 1 Lingua is drilling around 3,590 feet. The Gulf Production Co.'s No. 17 Davis is drilling around 3,700 feet; No. 18 is drilling around 3,020 feet; No. 19 is drilling around 2,300 feet; No. 20 is drilling around 1,540 feet; No. 9 Wheat is drilling around 3,450 feet.

Estimated Daily Production

The South Liberty Pool, in Liberty County was mainly responsible for the estimated daily average gross production of the Gulf Coast region approaching the 100,000-bbl. mark during the week. The estimate is placed at 96,785 bbls. compared with 78,895 bbls. last week. The South Liberty Pool with 16,000 bbls., showed a gain of 10,000 bbls. The southwest fields' gross daily average declined 735 bbls.

The estimate for each district is as follows:

District—	Gross Bbls.
Batson	1,510
Blue Ridge	740
Big Creek	540
Barber Hill	90
Dayton	40
Damon Mound	1,180
Edgerly (La.)	500
Goose Creek	8,700
Humble	4,825
Hull	25,500
Jennings (La.)	875
Markham	105
Orange	9,900
Pierce Junction	800
Spindletop	1,125
Saratoga	595
Sour Lake	4,050
Vinton (La.)	5,720
West Columbia	12,350
Welsh-Anse LaButte (La.)	90
Lockport (La.)	325
South Liberty	16,000
Miscellaneous	225
Total	96,785
Southwest Fields—	
Luling	29,200
Laredo	4,075
Somerset	2,600
Calliham	345
Rockdale-Minerva	440
Jim Hogg County	5,750
Total	42,410
Total for week	139,195
Total last week	122,040
Increase	17,155

Operations in Other Pools

In the Hull Pool, The Texas Co.'s No. 1 fee on the southwest side of the dome added to the gross production for the week when it came in flowing 5,000 bbls. at 3,065 feet. One hundred feet of screen was set. The oil shows 26 gravity. It is the best completion to date on that side of the dome which now shows possibilities that were not considered worth while six months ago. On the northwest side of the dome, the Monarch Oil & Refining Co.'s (Peer Oil) No. 4 Thompson bailed salt water at 3,175 feet. On the north side, the Gulf Production Co.'s No. 15 Scarborough will make a pumper at 3,930 feet. On the east side, the Republic Production Co. is bailing No. 6 Dolbear at 2,075 feet. On the southeast side, the Gulf Production Co.'s No. 47 Phoenix is flowing 600 bbls. at 3,300 feet. On the south side the Houston Production Co.'s No. 11 Barngrover is pumping 75 bbls. at 3,650 feet.

The Texas Co.'s No. 2 fee is drilling around 2,475 feet. The Texas-Vacuum Oil Co.'s No. 5 Hannah is a derrick. The Yount-Lee Oil Co.'s No. 6 Stengler, one of the sensations of the previous week which came in flowing 4,500 bbls. has dropped to 1,700 bbls., while the Humble Oil & Refining Co.'s No. 1 Merchant completed at the same time with 5,000 bbls. initial is flowing around 4,100 bbls. The Humble's No. 10 Guedry will pump at 3,325 feet; No. 16 is rigging up to work over; No. 2 Hannah is rigging up. The Mecom Oil Co.'s No. 8 Taylor is a location. The Eagle Point Oil Co.'s No. 3 Wheelock is drilling around 725 feet. The Republic Production Co.'s No. 105 is drilling around 2,800 feet; No. 106 is bailing at 2,075 feet; No. 107 is drilling around 1,750 feet; No. 108 is rigging up; No. 109 is drilling around 1,500 feet. The Higgins Oil & Fuel Co.'s No. 6 Taylor is rigging up. The Yount-Lee Oil Co.'s No. 5 Stengler is drilling around 2,850 feet; No. 11 Merchant is rigging up; No. 12 is a derrick. The Empire Gas & Fuel Co.'s No. 16 Barngrover is drilling around 3,900 feet. The Houston Production Co.'s No. 8 Taylor is drilling around 3,840 feet. No. 9 is waiting for rig. The Gulf Production Co.'s No. 49 Phoenix is rigging up; No. 48 is drilling around 1,700 feet; No. 12 Baldwin fee is drilling around 3,100 feet; No. 50 Phoenix is a location; No. 20 Morris-Phillips is drilling around 3,310 feet; No. 21 is a location; No. 17 David Hannah fee is drilling around 2,010 feet; No. 45 Phoenix is washing and No. 1 J. H. Stengler and others is drilling around 3,150 feet.

Goose Creek Pool

In the Goose Creek Pool, the Humble Oil & Refining Co.'s No. 60 Smith, on the east side is bailing at 4,215 feet. The Gulf Production Co.'s No. 2 Wright is bailing at 2,950 feet. The Southern Exploration Co. abandoned No. 2 Wright at 2,250 feet. Its No. 9 is pumping 35 bbls. at 1,575 feet, and No. 10 is making 250 bbls. of fluid, 30 per cent b.s. and water at 1,865 feet. The increasing production and drilling in the South Liberty and Hull Pools has resulted in a number of rigs being withdrawn from the Goose Creek Pool.

The Humble Oil & Refining Co.'s No. 1 Hog Island is deepening around 3,000 feet; No. 61 Smith is drilling around 2,730 feet. The Gulf Coast Oil Corp.'s No. 31 Gaillard is drilling around 2,570 feet. The Sun Oil Co.'s No. 2 Wright is drilling around 1,700 feet. The Inca Petroleum Production Co.'s No. 2 Duke will pump at 3,500 feet. The Norman Bruce Petroleum Co.'s No. 1 Scorrega is rigging up. The Copeland Oil Co.'s No. 5 Bryan is pumping wash water at 3,220 feet. The Southern Exploration Co.'s No. 2 Wright has been abandoned temporarily at 2,580 feet. The Gulf Production Co.'s No. 17 J. Gaillard fee is drilling around 300 feet; No. 30 Beaumont Petroleum is drilling around 2,650 feet; No. 32 Stateland Oil is drilling around 2,300 feet; No. 9 Chapman-Bryan is rigging up; No. 3 Paddock-Smith is drilling around 2,600 feet. No. 2 H. Busch is drilling around 2,950 feet. No. 10-C Gaillard is drilling around 2,515 feet.

Orange Pool

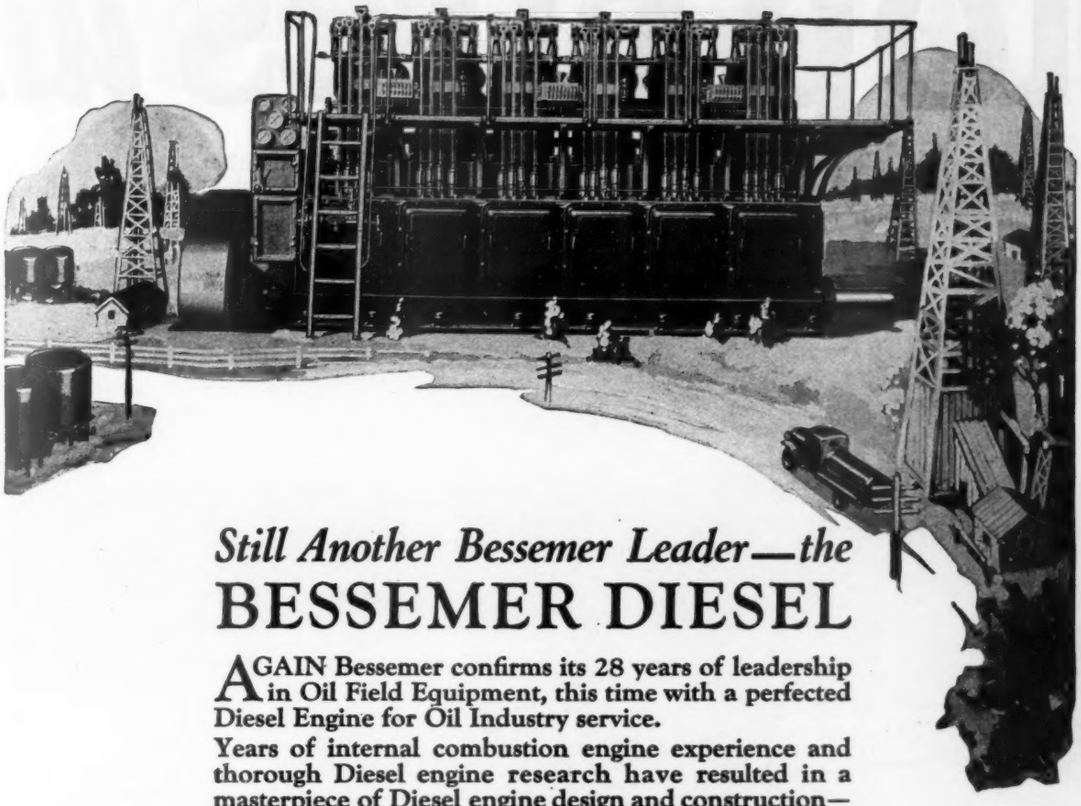
In the Orange Pool, the Orange Petroleum Co.'s No. 8 Chesson is a salt water hole at 3,550 feet and will be drilled deeper. The Rycade Petroleum Corp.'s is bailing No. 5-A Cow Bayou at 3,720 feet with 20 feet of screen set in the hole. Its No. 2 Cow Bayou set casing at 4,610 feet. The Gulf Production Co.'s No. 9 Kishi-Lang is flowing 2,000 bbls. at 3,190 feet. The same company is bailing No. 17 Hager fee at 4,000 feet. The Edgerly Petroleum Co. is swabbing No. 3 Carebello at 4,790 feet. The Orange Petroleum Co.'s No. 9 Winifree is bailing at 3,120 feet, as is the Sun Oil Co.'s No. 6 Gunstream at 4,600 feet and the Sinclair Oil & Gas Co.'s No. 4 Granger at 3,300 feet. The Kishi Development Co. worked over No. 5 McGuire at 3,375 feet and is bailing. It is on the east side of Cow Bayou.

The Humble Oil & Refining Co. is rigging No. 1 Perry Brown, 10 miles north of the city of Orange.

The Brownie-Babbittee Oil Co.'s No. 4 McLean is drilling around 4,820 feet; No. 2 Brown is fishing. The Tillery Oil Co.'s No. 1 State is fishing at 3,975 feet. The Humble Oil & Refining Co.'s No. 9-B Chesson is drilling around 3,825 feet; No. 10 is drilling around 4,365 feet; No. 21 is drilling around 5,070 feet; No. 11 Winifree is drilling around 4,672 feet. The Mutual Oil Co.'s No. 4 Chesson is drilling around 3,550 feet; No. 7 drilling at 4,450 feet; No. 14 is a derrick. The Sun Oil Co.'s No. 3 Brown is milling at 4,473 feet. The Supreme Oil Co.'s No. 1 Jackson is drilling around 4,532 feet. The Edgerly Petroleum Co.'s No. 3 Carbello is swabbing 4,790 feet. The Gulf Coast Oil Corp.'s No. 1 Leon is drilling around 3,175 feet. The Sinclair Oil & Gas Co.'s No. 4 Granger is bailing at 3,300 feet. The Atlantic Oil Corp.'s No. 3 Moore is drilling around 3,450 feet. The Monarch's No. 5 Galliere is whipstocking at 3,850 feet. The Gulf Production Co.'s No. 4-A Chesson is drilling around 4,450 feet; No. 10 Kishi-Lang is a location; No. 2-M Granger and others is drilling around 3,450 feet; No. 1-M Granger is drilling around 3,200 feet; No. 4 Hager-Moore is washing; No. 1 Winifree fee is milling at 3,000 feet.

The Texas Co.'s No. 12 Robinson at Blue Ridge is bailing at 4,020 feet. The Gulf Production Co.'s No. 10-C Blakeley is drilling around 3,010 feet; No. 8 Luscher is drilling around 2,225 feet; No. 9 Invincible Oil is drilling around 1,350 feet.

(Continued on Page 150)



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This newest addition to the Bessemer line of "Better Oil Field Equipment" embodies the utmost in engineering skill. It employs solid injection of fuel oil resulting in safety and fuel economy, while the many refinements in Diesel engine construction and the usual high Bessemer standard of quality materials make the Bessemer Diesel Engine an unequalled unit for all heavy-duty power requirements of from 50 H. P. to 1000 H. P.

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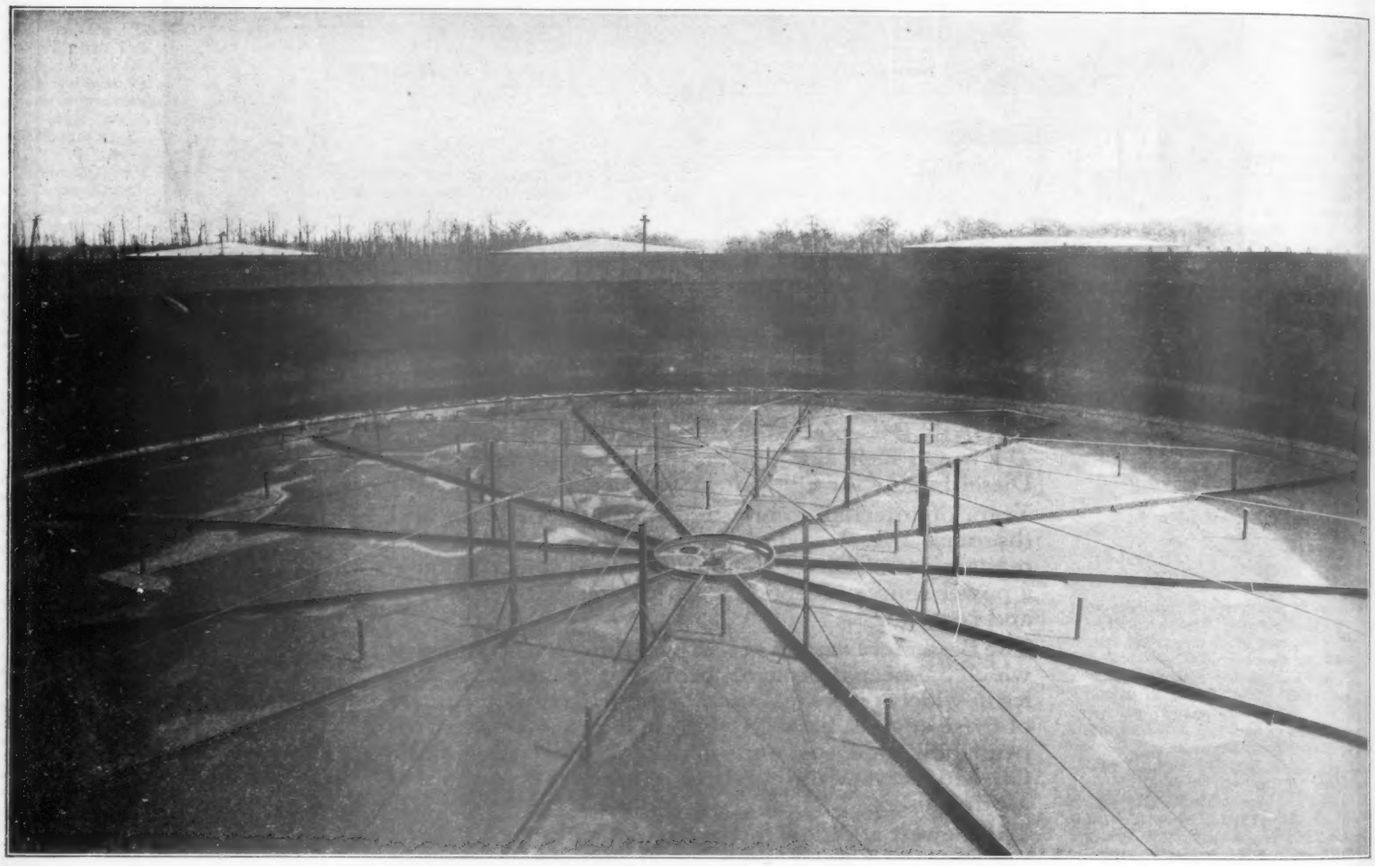
Stop Fires and

Ideal for Fire-Prevention

Because it supplies a permanent fire-resistive blanket which covers the oil, the Wiggins floating roof is ideal for preventing fires.



Improved—Standardized

As a result of more than two years' experience in building the Wiggins floating roof we have improved this remarkable device to the point where it is practically standardized in construction.

Two years ago it was an experiment. Today it is an assured success as a means of preventing evaporation losses and reducing fire hazard. Its performance is dependable; its results are sure. The minor faults always present in a new device have been discovered and eliminated.

The Wiggins roof today is a standard piece of equipment with us. It is furnished in diameters to fit your tanks. We fabricate, ship and install ready to operate. The day it is placed in operation it starts paying you dividends.

CHICAGO BRIDGE & IRON WORKS,
2128 Old Colony Building, Chicago

Gentlemen: Please send me a quotation on Wiggins roofs as follows:

Diameter..... Location .....
Diameter..... Location .....
Diameter..... Location .....

☐ Please send me your descriptive bulletin on the Wiggins Floating Roof.

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Company .....
Address .....

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Use this Coupon for obtaining prices or a Copy of our 28-page descriptive bulletin

Prevent Evaporation

Saves $11,550 a Year Over a Wooden Roofed Tank
This is in standing storage only. Where oil is being pumped through a tank, the loss will be much greater.

A Successful Record Behind It

Behind the Wiggins roof is a successful record of safe operation and accomplished results in evaporation. This roof has in every instance of northern installation gone successfully through the recent severe winter without a hitch or any trouble whatever. The bad sleet storm in December did no damage. Snows in January caused no trouble. Rain and ice and cold weather did not prevent these Wiggins roofs from operating day after day at their work of paying evaporation dividends and preventing fire.

There are two Wiggins roofs that have been in operation for fourteen months without one bit of attention. This is a super-test of the operating qualities of the roof—even a canopy-roofed tank has its screens and valves tested once a month.

What It Is

This roof is a simple idea that is starting to revolutionize oil storage. Think of it as the cover of a large tin can turned upside down and floating on the surface of oil placed in a can a trifle larger in diameter. Very evidently, there would be no evaporation of the blanketed oil except around the edge of the liquid where the surface is not covered by the lid. Add the seal, which seals this open surface between the floating roof proper and the shell of the tank, and you have essentially all there is to this remarkable device.

What It Does

The roof blankets the surface of the oil. Therefore there can be no evaporation. Because there is no evaporation there is no accumulation of gasoline vapor present as is the case under a canopy roof. Therefore, by eliminating evaporation we also eliminate the hazard of explosion and almost entirely eliminate the fire hazard.

In tests which were made in the fall of 1923 a 30-foot Wiggins roof, floating on gasoline, had gasoline poured upon it and ignited. The roof successfully resisted this effort to set on fire the gasoline under the roof.

Pays for Itself

On a rundown tank the Wiggins roof will pay for itself in four or five months. On pipe line gathering tanks it will pay for itself in less than six months. On main line pipe line tanks it will pay for itself in seven months if 10,000 barrels a day are handled and in twelve months if 5,000 barrels a day are handled. Even on crude storage tanks, where there is no pumping from day to day it takes only twelve months for the roof to pay for itself by eliminating the evaporation loss which would take place under a wooden roof. These figures are based on ten-cent gasoline; certainly a conservative average figure.

Will Save You Money

Your tanks are no exception. They are losing money for you every day unless they are equipped with this floating roof. The air space above the oil in a canopy-roof tank is a standing invitation to the gasoline vapors to pass off the oil and be lost to you forever. It is the best part of your oil that you lose in this way.

The Wiggins roof prevents this evaporation loss, pays for itself in a short time by the savings made, and at the same time furnishes fire protection that can be had in no other way.

Two roofs in service two years have saved by actual test enough to pay for themselves completely every six months!

Fire Safe!

Blanketing oil has long been known as the way to put out a fire. But until this roof was invented there was no way to blanket the oil until after the fire started.

The Wiggins roof locks the barn door before the horse is stolen; it places the blanket over the oil before the fire can start. It eliminates the explosion hazard entirely.

No Operating Difficulties

The roof is simple in construction. There are no difficulties in operation. Drainage is provided in one of two ways which we have perfected. Water drains off automatically. The roof raises and lowers with the surface of the liquid without any outside help. Every contingency has been foreseen and provided for. The roof has been tested and tested again in actual operation until we are confident that it is an assured success.

Let Us Send You Quotations on Diameters You Need

The next thing you will want to do is to have our nearest office quote you upon the diameters you want to install. You will want to take off some old wooden roofs (which carry a much greater insurance premium than the Wiggins roof) to eliminate the constant fire hazard they maintain on your property, and, irrespective of the type of existing roofs, install the Wiggins roof on some of your working tanks to stop the heavy evaporation losses that exist there.

Use the coupon on the opposite page to let us know the diameters and locations you want quotations on. Even if you don't want to request quotations today you will want to get your copy of the 28-page revised Wiggins bulletin, which is chock-full of reliable data on evaporation losses and the savings actually accomplished by the Wiggins roof.

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The WIGGINS FLOATING ROOF

Keeps Oil In · Keeps Fire Out

Oklahoma Field Operations

By C. D. Lockwood

Cromwell Field extended east and west by two wells which started at rate of 40 bbls. an hour. Production of Oklahoma declining rapidly. Deep test in Blackwell gas field makes 300 bbls. oil in two days. Test north of Perry, Okla., makes flow of 41 gravity oil. Papoose well makes 500 bbls.

While the past week in the Oklahoma fields was not entirely devoid of interest, there were no developments of especially great importance. The Una Lee Oil Co. had what appears a good find in Kay County, while to the south in Noble County, the Bu-Vi-Bar Oil Co. had a showing of oil that makes the surrounding land, a short time ago considered of little value for oil, become of considerable importance. The Cromwell Field, which is continuing at the present time to register a decline in production, had a new well in Section 3, which is a slight extension to the east, while the Gypsy Oil Co. made an extension to the west in the same field, both wells being good for 40 bbls. an hour; the north extension had three new wells also, one of them drilling through the producing stratum into water.

The Una Lee Oil Co.'s No. 1, NE cor. Section 18-27-1w, a deep test west of the Blackwell gas field, had what was said to be the Wilcox sand at 3,531-40 feet, was flowing by heads every few hours, and in two days had put 300 bbls. in the tank. There were 300 feet of open hole, and many were wating eagerly for the well to get a real test when pipe can be set.

The most interesting well Noble County has had in some time is the Bu-Vi-Bar Oil Co.'s test north of the town of Perry. C SW SW, Section 15-21-2w. No fields have been developed in this part of the State, though it seemed favorably situated on the map, being between the Garber Field, in Garfield County to the west, and the smaller Pawnee County pools east of it. Sand was found at 1,902-12 feet, and the hole filled to 1,200 feet in a few hours of 41 gravity oil. On Sunday the well made a flow while it was being cleaned out and tubing run.

Cromwell Field

The Gypsy Oil Co. and the Laurel Oil & Gas Co.'s No. 4 Fixico, C NE NW NW, Section 4-10-8, was a 40-bbl.-an-hour well, and the farthest northwest in the Cromwell Field. Sand was found at 3,344-99 feet. The Southwestern Petroleum Co.'s No. 1 Little, NW cor. SE, Section 3-10-8, found sand at 3,387-3,445 feet, and was good for 40 bbls. an hour at the start. It is an east offset to the Roxana Petroleum Corp.'s well, NE cor. SW, same section, which was also good for 40 bbls. an hour, and an east extension well.

On the north side of the Cromwell Field, the Mutual Oil Co.'s No. 3, NE cor. SW SE, Section 33-11-8, topped sand at 3,295 feet, and at 3,375 feet was making 25,000,000 feet of gas and 40 bbls. of oil a day. The McMan Oil Co.'s No. 1, SW cor. SE SW, Section 34-11-8, topped sand at 3,348 feet, had oil at 3,368 feet, and when drilled to 3,408 feet made 580 bbls. in 16 hours, with increasing amounts of water; the last three feet were said to be in water sand. The Mutual Oil Co.'s No. 2, C SE SW SE, Section 33-11-8, topped sand at 3,318 feet, and at a total depth of 3,380 feet was making 25,000,000 feet of gas a day and 10 bbls. of oil.

Papoose Field

In the Papoose Field, Hughes and Okfuskee Counties, the Carter Oil Co.'s No. 6 Johnson, C SW SW SE, Section 33-10-9, had sand at 3,082-86 feet, good for 500 bbls. The Magnolia Petroleum Co. had a hole full of water in No. 3 Brown, C NE NW SE, Section 18-9-9, at 3,505-15 feet, and was planning on testing lower sands in that well. T. B. Slick's deep test, No. 2 Dunson, C SE NE, Section 35-10-9, had a hole full of water at 4,158-62 feet.

The Sinclair Oil & Gas Co.'s deep test, No. 1 Manley, C SE SW NW, Section 1-8-8, flowed 105 bbls. on Friday and was put on the swab. The sand is said to be the Wilcox, at 4,063-72 feet; the lime was topped at 3,975 feet.

The Blackwell Oil & Gas Co.'s No. 1, NE cor. NW, Section 2-27-1w, was good for 44,000,000 feet of gas at 3,440-52 feet.

During the week ended March 14 there were 73 wells completed in Oklahoma, of which 38 were oil wells, with a total initial production of 6,515 bbls. There were 26 dry holes, and 9 gassers. Locations made numbered 72, while there were 180 rigs up, and a total of 892 wells drilling. The number of wells shut down was 217.

Daily Average Production

Daily average production of principal fields in Oklahoma as of the week ended March 18 was as follows:

Fields—	Wells	Bbls.
Braman	8	2,272
Wewoka	116	11,843
South Weleetka	24	1,985
Cromwell	302	31,300
Papoose	130	23,460
Graham	106	10,130
Healdton	1,916	15,630
Hewitt	795	15,860

Burbank Production

Daily average production of the Burbank Field for the week ended March 18 was as follows:

Company—	Wells	Barrels
Carter Oil Co.	250	9,094
Mid-Continent Pet. Corp	106	2,316
Comar Oil Co.	7	141
Devonian Oil Co.	16	203
Gypsy Oil Co.	196	4,432
Kewanee Oil & Gas Co.	25	421
Laurel Oil & Gas Co.	16	241
Lorraine Pet. Co.	15	133
Lewis Oil Corp.	2	315
Midland Petroleum Co.	37	1,141
Mid-Kansas Oil & Gas Co.	40	1,275
Peters & Oliphant	2	153
Phillips Petroleum Co.	126	10,465
Phillips Pet. & Skelly Oil	176	4,278
Phillips Pet. & Delmar Oil	16	1,398
Prairie Oil & Gas Co.	106	2,207
Producers & Refiners Corp.	29	425
Roxana Petroleum Corp.	55	650
Simons & Moore	29	266
Sinclair Oil & Gas Co.	145	2,627
Skelly Oil Co.	21	906
Tidal-Osage Oil Co.	43	702
The Texas Co.	10	554
Twin State Oil Co.	24	897
Total	1,492	45,240
Kay County Extension—		
The Texas Co.	16	250
George Bole	3	248
Carter Oil Co.	11	1,119
Comar Oil Co.	19	1,131
Mid-Continent Pet. Corp.	16	1,106
Gypsy Oil Co.	19	368
Laurel Oil & Gas Co.	5	202
Mid-Kansas Oil & Gas Co.	10	726
Phillips Petroleum Co.	31	3,247
Prairie Oil & Gas Co.	4	208
Pure Oil Co.	5	340
Roxana Petroleum Corp.	8	404
Dye-Tomlinson et al	8	497
Skelly Oil & Phillips Pet.	20	314
Sinclair Oil & Gas Co.	5	211
Twin State Oil Co.	15	1,130
Total	195	11,501
Total entire field	1,687	56,741
Total previous week	1,677	56,028
Difference	10	713

Tonkawa Production

Daily average production of the Tonkawa Field for the week ended March 14 was as follows:

Company—	Wells	Barrels
Amerada Pet. Corp.	35	6,136
Blackwell Oil & Gas Co.	34	2,748
Carter Oil Co.	4	128
Champlin Refg. Co.	2	12
Champlin Refg. & Twin State	1	10
Comar Oil Co.	363	32,763
Mid-Continent Pet. Co.	16	218
Gypsy Oil Co.	99	19,398
Healdton Oil & Gas Co.	27	1,187
Wentz Petroleum Corp.	47	8,158
McMan Oil Co.	2	983
Pennok Oil Co.	32	4,103
Phillips Petroleum Co.	3	147
Prairie Oil & Gas Co.	12	520
Sinclair Oil & Gas Co.	1	10
T. B. Slick & Comar Oil	38	2,956
Southwestern Pet. Co.	15	560
The Texas Co.	5	1,478
White Eagle Oil & Refg.	7	58
Total	750	81,573
Total previous week	750	86,678
Difference	0	5,106

The daily average production of the deep sand in the Tonkawa Field during the same period was as follows:

Amerada Pet. Corp.	7	5,985
Pennok Oil Co.	7	3,166
Comar Oil Co.	40	24,198
Gypsy Oil Co.	16	16,753
T. B. Slick	7	1,419
Blackwell Oil & Gas Co.	4	1,913
Wentz Oil Corp.	5	6,963
The Texas Co.	1	1,439
Phillips Petroleum Co.	1	94
McMan Oil Co.	1	981
Total	89	62,911
Total previous week	87	67,504
Difference	2	4,593

In the Cromwell Field

The Waite Phillips Co.'s No. 5-A Dunn, C NW NW SE, Section 4-10-8, made 20 bbls. naturally from sand at 3,442-3,512 feet, and was not increased by a 20-quart shot. The Mid-Continent Petroleum Corp.'s No. 6 Yarhola, C NW SE SE, Section 15-10-8, was completed, with sand at 3,506-47 feet, and was good for 1,456 bbls. naturally. The same company's No. 3 Bruner, C NE SE NE, Section 17-10-8, was dry and abandoned at 3,584 feet.

In the Papoose Field

The Kingwood Oil Co.'s No. 7 Sand, C NW SE SW, Section 35-10-9, in the Papoose Field, was good for 25 bbls naturally from sand at 3,303-29 feet. The same company's No. 8 Sand, C NE SW SW, Section 35-10-9, topped sand at 3,-306 feet, with a show of oil to 3,307 feet, and had broken sands from 3,307 to 3,321 feet, where oil was encountered, making 150 bbls. naturally with a total depth of 3,329 feet. T. B. Slick's No. 6 Bruner, C NW SE NW, Section 2-9-9, was making 127 bbls. of oil from sand at 3,324-34 feet, and 1,000 bbls. of water from sand at 3,334-36 feet. It was plugged back 2 feet. The Mid-Continent Petroleum Corp.'s No. 9 Alexander, C SW NW NW, Section 3-9-9, topped sand at 3,288 feet and had oil from 3,325 to 3,329 feet, where it was making 750 bbls. naturally. T. B. Slick's No. 3 Grayson, C NE SE NE, Section 3-9-9, was good for 500 bbls. naturally from sand at 3,295-3,312 feet; No. 3, C NW NW SE, Section 3-9-9, was good for 1,587 bbls. from sand at 3,302-14 feet. The same owner's No. 2 Grayson, C NE NW SE, Section 3-9-9, was dry and abandoned at 3-310 feet.

Osage County

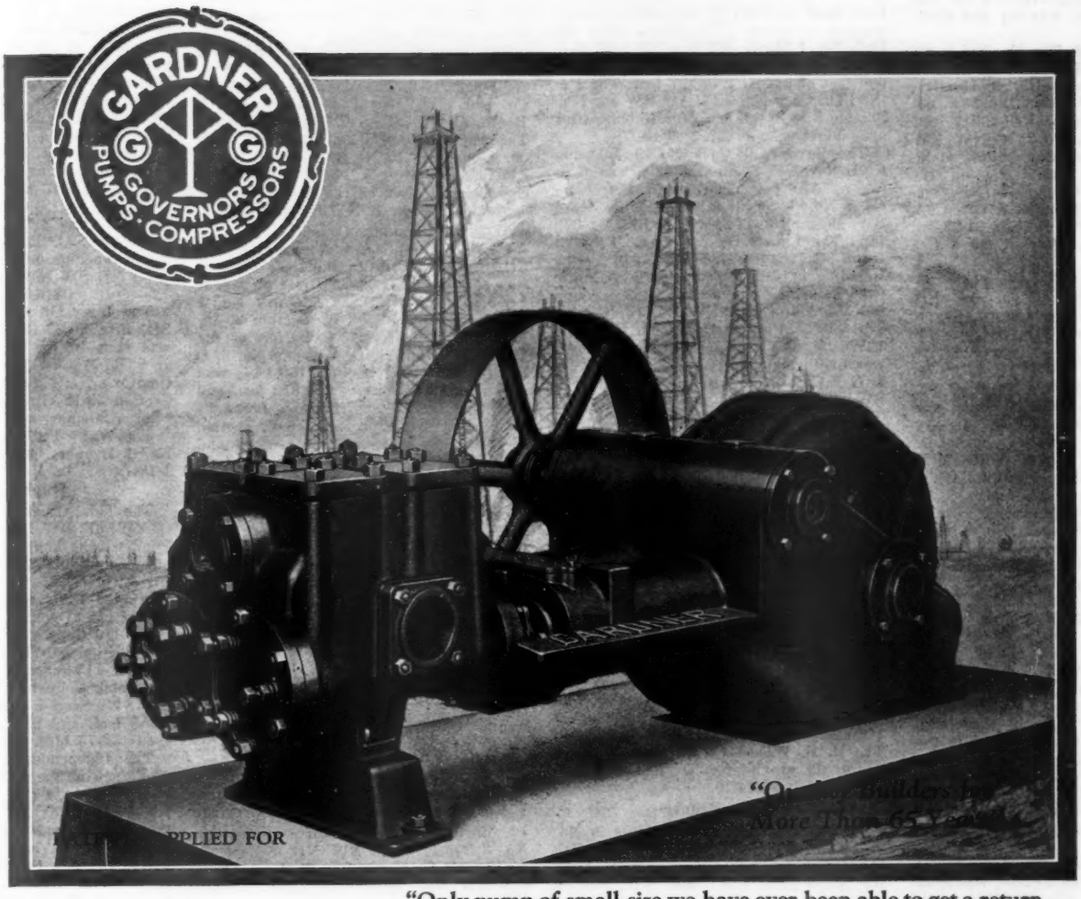
The Red Bank Oil Co.'s No. 1, SE cor. SW, Section 20-23-8, in Osage County, was dry and abandoned at 3,125 feet. The Pure Oil Co.'s No. 3, C E half SW SE, Section 36-22-8, was shut in for 1,500,000 feet of gas at 2,406-07 feet, total depth 2,412 feet. The Peters Petroleum Co.'s No. 3, NW cor. SW, Section 4-23-9, was plugged back to 2,156 feet, and shot with 120 quarts at 2,098-2,146 feet and was cleaning out. The Tidal Oil Co.'s No. 38, SE cor. SW SE NW, Section 34-22-10, was swabbing 160 bbls. of oil and 150 bbls. of water from 2,256-65 feet. The same company's No. 40, NW cor. NE NW NW, Section 34-22-10, was shot with 180 quarts at 1,167-1,215 feet and was good for 15 bbls. The Alcorn Oil Co.'s No. 2, CEL SW, Section 24-21-9, was shut in for 7,000,000 feet of gas at 2,011-33 feet. The Shelby Oil & Gas Co.'s No. 7, NE cor. NW NE NW, Section 16-21-12, was good for 14 bbls. at 1,343-64 feet after a shot of 60 quarts. The Sterling Oil & Gas Co.'s No. 3, SE cor. Section 16-21-12, topped the Bartlesville at 1,347 feet, had oil at 1,382 feet, total depth 1,400 feet; it was shot with 120 quarts, and was good for 30 bbls.

The Owen Osage Oil Co.'s No. 315, CNL NW NW NW, Section 31-28-11, Osage County, was shut in for 2,000,000 feet of gas at 1,833-37 feet.

The Beacon Oil Co. was rigging up a machine for No. 8, C W half SE, Section 27-29-11. Duffield & Howard had a machine up for No. 2, C SW SE, Section 28-28-11. The Owen-Osage Oil Co. was moving in a rig for No. 318, NE cor. NW NW, Section 31-28-11. The Lewis Oil Co. rigged up and shut down No. 1, CEL NE NE, Section 1-26-9. The Texas Co. was rigging up for No. 1, SE cor. Section 25-26-9. The Tidal-Osage Oil Co. was spudding in No. 7, C E half SE NE, Section 20-24-9. The American Oil & Development Co. was spudding in No. 18, SE cor. SW SE NE, Section 13-23-10. The Atlantic Oil Producing Co. had a rig on the ground for No. 3, NW cor. NE NW SE, Section 8-22-9. The Indian Territory Illuminating Oil Co. was spudding in No. 1, SW cor. NW NW, Section 1-21-8. The Wah-Shah-She Oil Co.'s No. 1, NE cor. NW NE SE, Section 13-29-9, was shut down at 330 feet. The Mid-Kansas Oil & Gas Co.'s No. 1, CSL SE SE SE, Section 20-25-8, had 3,000,000 feet of gas at 2,374-78 feet, and was drilling at 2,490 feet. The same company's No. 2, SE cor. SW SE SE, Section 20-25-8, had 2,000,000 feet of gas at 2,353-55 feet and was drilling at 2,450 feet. The Devonian Oil Co.'s No. 1, NW cor. NE, Section 34-25-11, was drilling at 150 feet. The same company's No. 9, SW cor. SE SW, Section 34-25-11, was rigging up. The Sinclair Oil & Gas Co.'s No. 20, SE cor. NE SE, Section 32-22-10, was drilling at 270 feet. The Skelly Oil Co. and others' No. 16, CWL SW, Section 34-22-12, was drilling at 800 feet. The Midco Petroleum Co.'s No. 1, NE cor. SE, Section 21-21-10, was drilling at 300 feet. The Fidelity Oil Co. was spudding in No. 8, CWL NE, Section 16-21-12. The Sand Springs Home's No. 6-A, SE cor. Section 21-20-11, was abandoned at 2,363 feet and the rig skidded 50 feet west. The Gray Oil Co.'s No. 8, CNL NE NE NE, Section 28-20-11, was drilling at 430 feet. The Sand Springs Home's No. 1, C W half NE SE, Section 30-20-11, was spudding in.

Burbank Completions

Recent completions in the Burbank Field, Osage and Kay Counties, include the following wells: Phillips Petroleum Co.'s No. 1, SW cor. NE, Section 11-27-5, top of sand 3,005 feet, oil at 3,021 feet, total depth 3,071 feet; 150 bbls. after a 130-quart shot; No. 5, CWL SW NE, Section 11-27-5, first oil at 3,004 feet, total depth 3,058 feet, 1,000 feet of oil in hole before shooting; No. 9, CWL SW NW NE, Section 11-27-5, sand at 3,004-48 feet, made several flows, and hole bridged when shot; No. 13, NW cor. NE, Section 11-27-5, filled hole 1,000 feet naturally, sand at 2,968-3,036 feet; No. 8, CEL NE SE SE, Section 11-27-5, 800 bbls. from sand topped at 2,991 feet, bottom of sand 3,040 feet; No. 2, CSL SE SW SW, Section 12-27-5, sand at 2,970 feet, oil 2,894-3,040 feet with bottom in sand; made one flow; No. 12, CEL SE NE SW, Section 12-27-5, 900 bbls. after shot of 140 quarts at 3,004-60 feet; Carter Oil Co.'s No. 2, CNL NW NE NE, Section 20-26-6, 303 bbls. after being shot with 100 quarts at 2,925-91 feet; No. 4, NE cor. NW, Section 21-26-6, swabbed 53 bbls., sand at 2,925 with oil at 2,935-80 feet; Lewis Oil Co.'s No. 1, NW cor.



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"Only pump of small size we have ever been able to get a return with in handling heavy slush," says the Superintendant of a large producing company, regarding the new GARDNER "Baby Booster" with 4½ x 10 inch slush end. This company's workover gang at Goose Creek now refuse to use any other pump.

Our "Baby Booster" was especially designed for portable drilling rigs. It has our new enclosed, flood-lubricated power end. Users everywhere report better returns with this pump than with any other of like size in their experience. Ask for literature.

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Alamo Iron Works, San Antonio
Pelican Well Tool and Supply Co., Shreveport.
Haywood Williamson Co., Shreveport.
Republic Supply Co., Los Angeles.
Kirk W. Eickelberger, Rialto Building, San Francisco.
Perkins McIntosch Petroleum Tool and Boring Co., Ltd., 25 Bishopsgate E. C. 2, London, England

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GARDNER

NE, Section 21-26-6, 1,400 feet of oil in hole naturally, sand at 2,931-84 feet.

Garfield County

Crews & Heone's No. 23 Crews, CWL SE, Section 19-22-3w, Garfield County, had 500 feet of oil in the hole from sand at 1,980-2,000 feet. The Sinclair Oil & Gas Co.'s No. 2 Bangetter, SE cor NE SE, Section 26-22-4w, was dry and abandoned at 2,770 feet.

The Sinclair Oil & Gas Co. had a rig up to deepen No. 7 Hartley, CSL SE NE, Section 18-22-3w, and No. 9 Hartley, NE cor. NW NW, Section 18-22-3w, old total depth of the latter well 2,047 feet. The same company's No. 2, C NW NW SE, Section 18-22-3w, was drilling at 2,260 feet, and there was a rig on the ground for No. 19, C SE NW NE, Section 19-22-3w. The Imo Oil & Gas Co.'s No. 2, C NW NE SW, Section 31-22-3w, was rigging up. The Sinclair Oil & Gas Co. was drilling at 1,334 feet in No. 1, SE cor. NE, Section 13-22-4w, was building a rig for No. 17, SE cor. NE NE, Section 13-22-4w, and had a rig up for No. 20 Hay, SE cor. NE NE, Section 13-22-4w.

Logan County

The Blackford Oil Co.'s No. 1, C SE, Section 28-16-1w, in Logan County, was fishing for tools at 600 feet.

Caddo County

English & Jacobs' No. 2 White, C W half NE NE, Section 1-5-10w, Caddo County, was drilling at 725 feet.

Pawnee County

The Magnolia Petroleum Co.'s No. 2 Gowling, C SW SE SW, Section 9-20-6, in Pawnee County, was good for 85 bbls. after a 40-quart shot at 3,047-92 feet. The Westerly Oil Co.'s No. 1-A Smith, SW cor. Section 22-20-6, was making 250 bbls. naturally from sand at 3,110-12 feet. Ed. Reese and others' No. 5 Townsite, CWL NW NE NE, Section 17-20-7, was good for 75 bbls. after shots of 20, 40 and 80 quarts at 2,687-2,718 feet. C. H. Burton's No. 6 Christman, NW cor. SE NE, Section 25-20-7, was good for 20 bbls. after shots of 60 and 100 quarts at 2,529-67 feet. The Southwestern Petroleum Co.'s No. 12, SE cor. NE NW, Section 24-20-8, was good for 50 bbls. of oil and 3,000,000 feet of gas at 2,792-2,803 feet.

The Phillips Petroleum Co.'s No. 1, C SE NW NE, Section 20-24-5, was spudding in at 310 feet. The Mid-Kansas Oil & Gas Co.'s No. 1-A, C SE NE NW, Section 4-23-5, was a rig. Ed Rich and others had a rig on the ground for No. 1-A, C NW NW SW, Section 3-22-5. New England Oil & Pipe Line Co. was rigging up No. 1, C SE SE NW, Section 22-22-6. C. J. Wrightsman's No. 1 Hill, C NE SE SW, Section 1-21-5, was spudding at 200 feet. The Magnolia Petroleum Co. had a rig on the ground for No. 3 Gowling, C SE SW SW, Section 9-20-6. The Fern Oil Co.'s No. 2 Lesher, NE cor. NW NE, Section 21-20-6, was drilling at 450 feet. Adamson and others had a machine up for No. 4 Sigan, SW cor. NW SW, Section 32-21-8. The same owners' No. 1 Sigan, SE cor. SW SW, Section 32-21-8, was drilling at 2,572 feet. The Johnson Oil & Refining Co. had a rig on the ground for No. 1 Eades, SE cor NW, Section 7-20-7. C. F. Noble's No. 2 Rule, SE cor. SW SE, Section 9-20-7, was Bradenheaded for 3,000,000 feet of gas at 2,453-2,528 feet, and made 3,500,000 feet of gas and a spray of oil at 2,608-18 feet with the bottom still in sand. The Superior Oil Corp.'s No. 1 Gillespie, SW cor. NW NE, Section 9-20-7, was drilling at 440 feet. Ora Steen and others had a rig up for No. 1-A Orr, NE cor. Section 20-20-7. R. F. Griffith and others' No. 1 Brown, SE cor. NW, Section 25-20-7, was drilling at 3,120 feet.

Creek County

In Creek County, the Phillips Petroleum Co. had two dry holes; No. 1, SW cor. Section 13-14-9, at 3,808 feet, and No. 1 Dixon, NW cor. SE, Section 13-14-9, at 3,900 feet. The Devonian Oil Co.'s No. 1 Durant, NW cor. SW NW, Section 27-14-9, was dry and abandoned at 3,191 feet. F. R. Billingslea's No. 2 Micco, SE cor. NE NE, Section 28-14-9, had 2,300 feet of oil in the hole from sand at 3,124-50 feet. The Mid-Continent Petroleum Corp.'s No. 1 Mayes, NE cor. SE, Section 28-14-9, was dry and abandoned at 3,823 feet. C. F. Noble's No. 2 Cooper, C SE NE NW, Section 20-14-10, made 230 bbls. naturally from sand at 3,374-79 feet, and when shot later with 14 quarts made 202 bbls. Quinlan & Henry's No. 1 Daniel, C NE SE NW, Section 20-14-10, was making 100 bbls. naturally from sand at 3,367-87 feet, with a small amount of water. The Black Gold Oil Co.'s No. 1 Harjo, SW cor. SE SW, Section 13-17-8, was completed for 20,000,000 feet of gas at 2,768-97 feet. The Pulaski Oil Co.'s No. 7 Filsom, SW cor NE, Section 8-15-8, was good for 45 bbls. after a 50-quart shot at 3,753-83 feet.

The Savoy Oil Co.'s No. 5 Johnson, CNL NW NE, Section 23-17-8, was drilling at 570 feet. The Olean Petroleum Co.'s No. 4 Washington, SE cor. NW SW, Section 32-17-8, was drilling at 370 feet. The Laurel Oil & Gas Co.'s No. 9 Knoll, C NE SW, Section 22-16-8, was spudding in. Billingslea and the Atlantic Oil Producing Co. had a rig on the ground for No. 1 Rogers, SE cor. NW, Section 3-15-7. The Phillips Petroleum Co.'s No. 1 Wattie, NW cor. NE, Section 31-15-8, was drilling at 330 feet. The Prairie Oil & Gas Co.'s No. 8 Rentie, SE cor. NE SW, Section 2-14-8, was spudding in. The Pure Oil Co.'s No. 1 Mitchell, SW cor. NW, Section 29-14-8, had 7,000,000 feet of gas at 1,185-1,205 feet.

C. G. Tibbens had rigs up for No. 9, CWL NW SE, Section 30-15-9, and No. 10, CEL NE SW, same section. The Wolverine Oil Co. had a rig up for No. 6 Clark, C NE SW SW, Section 22-15-10. The Cumberland Petroleum Co. had a rig up for No. 3 Harry, SE cor. NW NW, Section 27-15-10. The Texas Co. was spudding in No. 2 Harry, NE cor. NW, Section 27-15-10. W. J. Harmon and others had a rig up for No. 4, CSL NW NE, Section 33-15-10. The Pulaski Oil Co. had a rig up for No. 1 Long, NE cor. SW, Section 6-14-9. Billingslea and the Carter Oil Co. had a rig up for No. 1 Mayes, NW cor. SE, Section 22-14-9. The H. F. Wilcox Oil & Gas Co. had a rig on the ground for No. 8, C NW SE NE, Section 20-14-10.

Payne County

The Garr Oil Co. was spudding in No. 3 Armour, C SE SE, Section 8-19-5. The Home Gas Co. had a rig on the ground for No. 4 Ellis, CWL SW NW, Section 1-18-5. The Shaffer Oil & Refining Co. had a rig on the ground for No. 14 Laughlin, C NW NE NE, Section 2-18-5.

Lincoln County

The Magnolia Petroleum Co.'s No. 1, NE cor. SE, Section 32-15-4, in Lincoln County, was dry and abandoned at 3,995 feet. The Pure Oil Co.'s No. 1, SE cor. SW, Section 12-14-4, was dry and abandoned at 4,917 feet.

The Stebbins Oil & Gas Co. had a rig on the ground for No. 1, SE cor. NW, Section 33-17-6. The Magnolia Petroleum Co. had a rig on the ground for No. 3 Booth, C SW SE SW, Section 34-15-5. The Amerada Petroleum Corp. had a rig on the ground for No. 1 Belless, NE cor. SW, Section 3-14-5. The Prairie Oil & Gas Co. had a rig on the ground for No. 5 Stout, C NW NE NW, Section 3-14-5.

Okmulgee County

C. F. Noble's No. 1 Adams, NE cor. SE, Section 19-15-12, Okmulgee County, was shut in for 1,000,000 feet of gas at 1,050-62 feet. D. D. Mickleson's No. 1 Adams, NW cor. SE SW, Section 20-15-12, was shut in for 2,500,000 feet of gas at 1,055-73 feet. G. D. Misner's No. 6, C E half, SW SW, Section 16-14-14, was shot with 120 quarts at 790-812 feet, and was good for 15 bbls. King & Jackson's No. 3 Hayes, NW cor. SE SW, Section 11-13-12, was making 60 bbls. of oil and 1,500,000 feet of gas at 2,050-54 feet. The Waite Phillips Co.'s No. 1 Kanard, SW cor. NW, Section 33-13-12, was making a spray of oil with 20,000,000 feet of gas at 3,325-35 feet. M. P. Evans' No. 1 Henry, C SE SE SE, Section 20-12-13, was dry and abandoned at 3,360 feet.

The Shaffer Oil & Refining Co. was rigging up No. 4 Carolina, C NE SW SE, Section 17-15-11. Detrick & Detrick had a rig up for No. 1 Adams, C NE NE, Section 2-14-11. Kirkland & Sons' No. 1, NE cor. SE, Section 17-15-13, was drilling at 1,120 feet. J. S. Haas and others' No. 10, C NE NW, Section 15-14-14- was rigging up. The Holly Oil Co.'s No. 1 Morton, C SE SE NE, Section 32-13-12, had 4,000,000 feet of gas at 786-904 feet, and was drilling at 975 feet. W. C. Newman and others had a rig up for No. 2 Larney, NW cor. NE SE, Section 33-13-12. Morton and others had a rig up for No. 3 Tiner, CWL SW NE, Section 7-12-12. W. B. Pine's No. 3 Hawkins, C SW SW SW, Section 20-12-14, had 5,000,000 feet of gas at 2,140-50 feet, and was drilling at 2,193 feet.

Muskogee County

The Iron Mountain Petroleum Co.'s No. 6, CNL NE NW, Section 24-13-14, was making 10 bbls. naturally from sand at 1,982-92 feet. Hazlett and others' No. 4 Freeman, SE cor. NE, Section 7-13-15, was shut in for 3,000,000 feet of gas at 2,196-2,208 feet.

Anicker & Hayes had a rig on the ground for No. 1 Manuel, C N half NW NE, Section 36-15-16. H. L. Jolly's No. 5 Crabtree, SE cor. NE NE, Section 2-14-18, was drilling at 820 feet. Mead & McGranahan had a rig up for No. 5 Scott, SW cor. SE NE, Section 15-13-14. Lucky Scott was rigging up No. 10, CWL SW NW, Section 23-13-14. The Laurel Oil & Gas Co.'s No. 2, CNL NW SW, Section 17-13-15, was drilling at 750 feet with a machine. C. E. Campbell and others had a machine on the ground for No. 2, CNL NE SW NW, Section 30-13-15.

Okfuskee County

The Josey Oil Co.'s No. 1, C NE NE SE, Section 32-12-11, Okfuskee County, was shut in for 25,000,000 feet of gas at 2,965-71 feet. The Independent Oil & Gas Co.'s No. 1 Jacobs, NW cor. SE SW, Section 33-12-11, was good for 490 bbls. after a 20-quart shot at 3,662-90 feet.

The Waite Phillips Co. was rigging up No. 1 Bruner, C SW SW SW, Section 1-12-7.

Hughes County

The Tidal-Osage Oil Co.'s No. 1 Autry, C NW SE SW, Section 3-9-11, Hughes County, was shut in for 10,000,000 feet of gas at 1,632-57 feet. The Mid-Kansas Oil & Gas Co.'s No. 5 Byrd, C NE SE, Section 4-9-11, was shut in for 850,000 feet of gas at 1,590-1,610 feet. The Tidal-Osage Oil Co.'s No. 5 Baker, C NW SW SE, Section 4-9-11, was good for 60 bbls. after a 115-quart shot at 2,964-70 feet. The same company's No. 2 Baker, C SE NE SW, Section 4-9-11, topped sand at 2,968 feet, and had pay at 2,978-88 feet good for 75 bbls. naturally.

The Independent Oil & Gas Co. was spudding in No. 1 Proctor, C SW SW NE, Section 11-7-8. The Dixie Oil Co.'s No. 1 Diamond "A," C NE SW SE, Section 18-8-10, was a rig. The Independent Oil & Gas Co. had a rig up for No. 1 C SW SE NE, Section 18-8-10. The Sinclair Oil & Gas Co. was building a rig for No. 1, C SE SW NE, Section 18-8-10. The Mid-Kansas Oil & Gas Co. was rigging up No. 4 Byrd, C NE NE SE, Section 4-9-11, and had a rig on the ground for No. 1, C NW NW NW, Section 10-9-11.

Seminole County

The Magnolia Petroleum Co.'s No. 4 Tiger, C SW NW SW, Section 32-8-8, in Seminole County, was dry and abandoned at 3,266 feet. Lewis & Clark's No. 2 Long, C SW SE SW, Section 33-8-8, was dry and abandoned at 2,950 feet.

Curtis Ryan and others had a rig on the ground for No. 1, C SE SE SE, Section 4-7-6.

Pottawatomie County

The Central National Petroleum Co. was moving in a rig for No. 1 Toney, C SW SW SW, Section 28-10-4, Pottawatomie County.

Pontotoc County

The Oklahoma Oil Co. was rigging up No. 2 Lloyd, C NE SW NE, Section 6-3-7, Pontotoc County.

Carter County

Westheimer & Daube's No. 1, C SW SW SW, Section 27-1s-3w, in Carter County, swabbed 75 bbls. in 10 hours from sands at 3,039-50 feet and 3,051-54 feet, after plugging back to 3,260 feet from a total depth of 3,510 feet. The Magnolia Petroleum Co.'s No. 1 Williams, C NW NW SW, Section 35-1s-3w, was dry and abandoned at 3,626 feet. The same company's No. 8 Lahman, C SE NE SW, Section 23-2s-3w, was good for 125 bbls. naturally from broken sands at 2,580-2,607 feet and 2,287-97 feet. The Amerada Petroleum Corp.'s No. 5 Criner, CEL NE NE SW, Section 20-5s-1, was good for 20 bbls. naturally after plugging back from 2,150 feet to 1,648 feet, the producing sands being at 1,530-40 feet and 1,625-40 feet. The same company's No. 3 Fish, CWL NE SE, Section

(Continued on Page 150)

Kansas Oil Field News

By C. D. Lockwood

Drilling operations are on the increase in Kansas. The Roxana Petroleum Corp's No. 2 Spruens, C SW NW SW, Section 10-33-3, in the Graham Field, Cowley County, had sand at 3,516-23 feet and made 600 bbls. naturally, and was later swabbing. The Marland Oil Co.'s No. 3 Bowers, C SE SW NW, Section 10-33-3 had sand at 2,557-77 feet, and flowed by heads, making 50 bbls. the first 24 hours. The entire field was averaging 2,050 bbls. daily during the latter part of the week, ended March 21.

T. B. Slick's No. 1-A Carson, SW cor. NE, Section 19-32-3, found the shallow sand at 2,575 feet and at a total depth of 2,615 feet, flowed 125 bbls. the first 10 hours.

The Rainbow Bend Field is the scene of a considerable amount of drilling activity, although no important or large wells have been brought in recently. At the close of last week it was making a daily average production of 11,750 bbls.

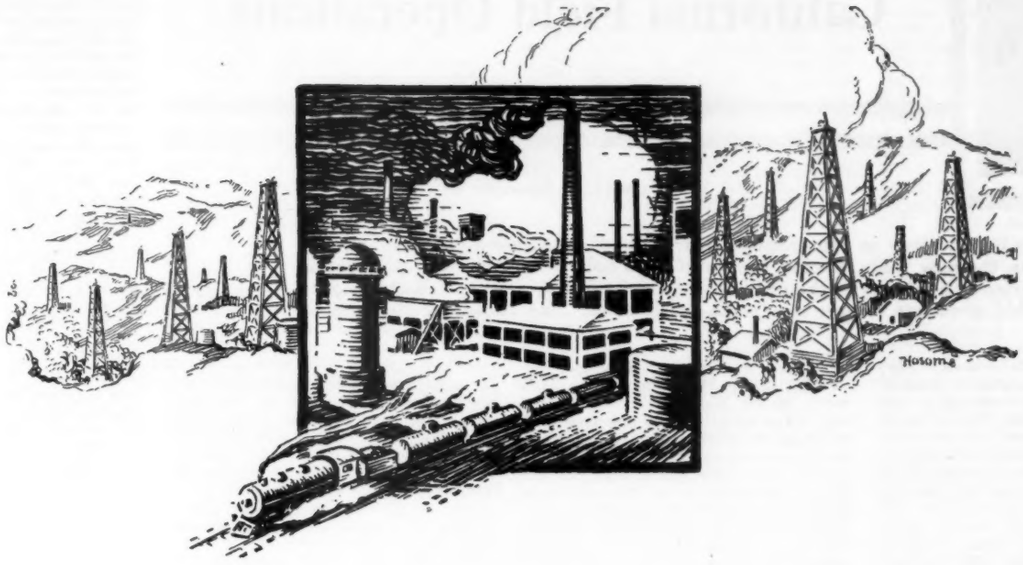
During the week ended March 14, there were 24 wells completed in the State of which 21 were producers, having a combined initial production of 2,370 bbls. There were three dry holes, and no gas wells. Locations staked numbered 55, while there were 118 rigs up and 270 drilling wells. Wells shut down or temporarily abandoned numbered 147.

Greenwood County

N. F. Clark and others' No. 1 Imm, SE cor. NW, Section 15-24-12, Greenwood County, was good for 20 bbls. from a sand at 1,715-42 feet when shot with 60 quarts. Roth & Faurot's No. 4 Biskiff, C SE NW, Section 12-25-8, was good for 15 bbls. after a 25-quart shot at 2,275-85 feet. Bason and others' No. 1, NE cor. SE SE, Section 5-25-9, was dry and abandoned at 2,751 feet. The Lewis Oil Co.'s No. 2, NW cor. SE, Section 9-25-9, was making 10 bbls. of oil and 20 bbls. of water on the pump after a shot of 40 quarts at 2,150-76 feet. The Prairie Oil & Gas Co.'s No. 8 Hellman, SW cor. SE SW, Section 14-24-9, was swabbing 120 bbls. after a 200-quart shot in sand at 2,126-94 feet. The Mission Oil Co.'s No. 3 Wiggins, NW cor. NE NW, Section 23-24-9, was good for 60 bbls. after a 120-quart shot in sand at 2,137-87 feet. The Mid-Kansas Oil & Gas Co.'s No. 2 Thrall, SE cor. SW SE NE, Section 29-23-10, was good for 40 bbls. after a 100-quart shot at 2,340-95 feet. The Mission Oil Co.'s No. 6 Thrall, CEL NW SW, Section 32-23-10, found sand at 2,270-2,305 feet, and swabbed 200 bbls. after a 60-quart shot.

The Phillips Petroleum Co. had a rig on the ground for No. 1, NW cor. Lot 14, Section 18-25-8. The Mid-Kansas Oil & Gas Co. had rigs on the ground for No. 13 Ladd, C E half NW SE, Section 19-25-9, No. 14 Ladd, CNL NE NW SE, Section 19-25-9, No. 6, CEL SE NW SW, Section 30-25-9, and had a rig up for No. 5, CSL SE NW SW, Section 30-25-9. The Flint Ridge Oil Co. was building a rig for No. 1, NW cor. SW SW, Section 23-26-9. Fisher, Louch & Moore had a rig up for No. 1, C SE SW NW, Section 12-22-11. The

(Continued on Page 150)



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California Field Operations

By L. P. Stockman

Two completions in Huntington Beach Field gave operators taste of old times, the new wells making 1,572 and 1,196 bbls. respectively. Long Beach experiencing activity in the drilling deeper of present wells. McKittrick gets 200-bbl. producer. Three new wells at Elk Hills. San Joaquin Valley active.

LOS ANGELES, Cal., March 21.—There was a very encouraging improvement in the amount of development work done in the San Joaquin Valley during February, when compared with the operations of the previous month. The fields in this section of the State yielded 26 of the 65 new wells finished in California during February and are credited with 24 of the 80 new rigs erected during that month. There has been a general improvement in the older fields for some time and judging by the amount of wildcatting being done north of the Tehachapi, it would not be surprising if a new producing area was opened up in that section. There is really no promising area at present in the valley, although there are several well defined structures being tested.

Maricopa

Development work in the Midway-Sunset area comprised the greater part of the total development work credited to the San Joaquin Valley during the past month. The Sunset section of this field contributed four new wells good for 150 bbls. a day and is credited with one-half the total number of strings of tools in operation in this area. The largest new producer added was the Transport Oil Co.'s No. 2 on Section 4-11-23. It was drilled to 3,985 feet and was good for 200 bbls. of 24.5 gravity oil upon completion.

The General Petroleum finished a 100-bbl. pumper when No. 395 Midway, Section 35-12-24 was put on the beam. It was drilled to 3,986 feet and yielded 14.3 gravity oil. The company has one other driller on this lease, No. 370 at 1,625 feet, and several rigs standing for future use. On Section 12-11-24 the company is drilling ahead in No. 60 at 1,085 feet and is making hole in No. 59-A at 790 feet. The B. B. & O. Oil Co. finished its nineteenth producer on Section 28-12-24 when well No. 27 was put on the beam. It pumped 75 bbls. of 14.1 gravity oil from 820 feet. The Big Ten Oil Co. is also credited with a 75-bbl. pumper. This company's latest acquisition, No. 6, on Section 36-32-23, is pumping 14.1 gravity oil from 1,286 feet. The Caliposa Petroleum has erected a new rig on this section, No. 2, and will probably start work within the next week or ten days. The Ethel D. Oil Co., Section 36-12-24, and the Kendon Petroleum, Section 35-32-24, are making rather slow progress with their drillers. The former's No. 1-A has reached a depth of 2,276 feet, while the latter's No. 3 is reported at 2,540 feet. The Mascot Oil Co. is going ahead nicely with well No. 4, Section 36-32-23, and shows 3,275 feet of hole. Well No. 9 of the Obispo Oil Co., Section 32-12-23, is rotating at 2,664 feet and should result in at least a 100-bbl. pumper upon completion.

The Pacific Oil Co. is running two strings of tools, No. 11 on Section 3-11-23 at 4,339 feet, and No. 11 on Section 35-32-24, at 3,850 feet. The Calavada Oil Co. is making good footage with its second hole on Section 34-32-24, and should finish a flowing well when No. 2, now at 4,400 feet, is completed. The Standard is doing the largest amount of drilling in this field and is credited with five drilling wells, four of which are in proven territory. No. 1 Ross on Section 10-11-23 is the deepest of the company's drillers at 4,890 feet, while No. 27 Maricopa, Section 1-11-24, is the shallowest at 1,995 feet. No. 43 Monarch, Section 2-11-24, has just passed the 2,000-foot level. On the M. J. M. & M. property, Section 36-12-24, the company has two new wells and two cleanout jobs which require attention. The new wells are Nos. 56 and 57 at 2,050 and 2,220 feet respectively. The workovers are No. 30 at 2,540 feet and No. 36 at 2,058 feet. J. W. Jamison spudded in a new well, No. 3 on Section 2-11-24, during the latter part of the month and made 910 feet of hole. The Petroleum Midway, California Petroleum, also undertook some new work and started a new well on Section 34-32-24. The Atlas Oil Co. initiated work on well No. 7, Section 30-12-23, and reported 896 feet of hole at the close of the month.

Midway

The Honolulu Oil Co. carried off completion honors at Midway by finishing four new wells, although the largest completion recorded stands to the credit of the Midland Oilfields. All four of the Honolulu's new producers were located on Section 6-32-24, a Government lease, which is yielding about 5,000 bbls. a day. The company's No. 21 was good for 25 bbls. from 2,686 feet, while No. 46 was good for 50 bbls. from 2,950 feet. No. 25, brought in from 2,916 feet, and No. 66, finished at 2,872 feet, were rated at 100 bbls. each. The output from all four completions tested 26,2 degrees in gravity. The Honolulu has two additional drillers on this lease, No. 55 at 2,428 feet, No. 64 at 2,640 feet, and five rigs standing. It is believed that the company will start at least two more holes immediately and augment them in the near future upon the completion of Nos. 55 and 64. The field's premier well was No. 13 on Section 24-31-23 of the Midland Oilfields, California Petroleum. It was drilled to 3,920 feet and came in flowing 600 bbls. of clean 27.1 gravity oil daily. In addition to this good well, the company finished a somewhat smaller one to the same property, No. 14. It was drilled to 4,061 feet and made 200 bbls. of 27.0 gravity on its initial test. The Midland Oilfields is starting three new holes on this lease, Nos. 15, 16 and 17. The company also started a new well, No. 2-B, on Section 34-31-24, and the crew made 1,600 feet of hole in five days. No. 1-B on this same property is going ahead at 4,415 feet.

The Pacific retained the distinction of drilling the largest number of new wells. The company has 11 to its credit, 2 on Section 25-31-23, 2 on Section 1-32-23, 2 on Section 31-31-24 and 1 each on Section 27-31-23, Section 3-32-24, Section 5-32-24, Section 7-32-24 and Section 15-32-24. No. 236 on Section 31-31-24 was a 75-bbl. pumper from 3,196 feet, the oil being clean and testing 26.8 degrees. As evidenced by the completion depth of 236 the company has two other holes nearing production on this section, No. 17 at 2,860 feet and No. 60 at 3,071 feet. The Caladon Oil Co. finished a 40-bbl. pumper on Section 19-31-23, when well No. 4 was put on the beam at 3,099 feet. The oil tested 16.1 degrees and showed a cut of 2 per cent. The Balboa Oil Co. finished an excellent well when No. 44 was given a try at 4,025 feet. This new producer, located on Section 24-31-23, tanked 320 bbls. of 27.6 gravity oil during the first 24 hours. The North American finished two good producers on Section 30-31-24 and immediately spudded in two new holes, Nos. 17 and 18. The company's successful completions were No. 14 at 4,065 feet and No. 16 at 3,606 feet. Both started off at the rate of 300 bbls. a day, the oil testing 27.3 degrees. The company has a good looking prospect in No. 15 on this lease which is showing oil and gas at 3,410 feet and two new rigs going up on Section 32-31-24. The Pyramid Oil Co. finished a 175-bbl. pumper on Section 28-32-24 when No. 11 was turned loose at 3,175 feet. The oil tests 24.6 degrees and shows a cut of 3 per cent.

Elk Hills

There were three new wells finished in the Elk Hills Field during February with an aggregate daily production of 400 bbls. The Pan American completed the largest of the trio of new wells added by bringing in well No. 3 on Lease 1, Section 1-31-24. It was drilled to 3,083 feet and is listed at 200 bbls., the oil testing 22.3 degrees and showing a cut of 2 per cent. The Pacific Oil Co.'s well No. 110 on Section 35-30-24 was a 150-bbl. pumper from 2,951 feet, the oil testing 19.8 degrees. The company still has three drillers on this lease, No. 8 at 3,030 feet, No. 89 at 3,160 feet, No. 103 at 2,980 feet and several derricks waiting for crews. The Standard finished a rather unsatisfactory well when No. 17 Kern County, Section 31-30-25, was put on the beam. It started off pumping 50 bbls. a day from 3,300 feet, the oil testing 13.4 degrees and showing a cut of 7 per cent. Upon the completion of this hole the company shifted the crew to No. 21 on the same lease and immediately started work on this new well. The Belridge and Associated Oil Cos. should each finish a new producer within the next few weeks as the former's No. 4, Section 34-30-24, is now at 3,285 feet, while the latter's No. 52, Section 26-30-24, is going ahead at 3,245 feet.

McKittrick

The Washington Petroleum finished an unusually good well in the McKittrick Field on Section 8-30-22. The company's third producer on this lease was good for 200 bbls. from 2,641 feet, the oil testing 13.8 degrees and showing a cut of 2 per cent. R. W. Edens put his No. 1, Section 36-29-20, on the beam at 400 feet and succeeded in pumping 10 bbls. of 14.1 gravity. The Union is temporarily suspending work on its Wisecarver lease, Section 29-30-22. The company's initial hole on this property was only good for 8 or 10 bbls. a day and in view of the present high production, it was deemed advisable to suspend operations because of the excessive cost of drilling, production on this lease being obtained at 4,835 feet. The Berry Holding Co. is again getting under way with well No. 8-A, on Section 13-30-21, and has just passed the 1,000-foot level with this new driller. The Wesco Petroleum is held up with a fishing job in well No. 21 on Section 36-29-20, at 302 feet.

Kern River

Two small pumpers were finished at Kern River during February, one by the Marland and one by Aladdin and Campbell. The former's No. 2 on Section 16-28-27 pumped 50 bbls. of 13.1 gravity oil from 2,658 feet. Upon the completion of this well, the Marland erected a rig for No. 3 and immediately set to work. Aladdin and Campbell's well No. 5 on Section 9-29-28 pumped 15 bbls. of 12.6 gravity oil from 961 feet. The East Puente Oil Co. abandoned No. 1, a former producer on Section 4-29-28, and started work on a replacement, No. 1-A, which is at present down 576 feet. There was very little change in the Kern River Field from a production standpoint, the output during February averaging apppproximately 17,700 bbls. a day, as compared with 17,873 bbls. daily average during the preceding month, January.

Coalinga

Not a single producer was finished at Coalinga during February, although there was one new hole started during the month. Due to the heavy production in southern California, the Shell is still curtailing its Coalinga production. The company has in excess of 10,000 bbls. a day shut in at Coalinga, which will probably not be opened up for several months. The Premier Oil Co. cemented a string of 10-inch in well No. 28 on Section 24-20-14 at 1,020 feet, while the Netherlands is going ahead in No. 6, Section 28-20-14, at 710 feet. The Ward Oil Co. has not had any luck in securing production in No. 11, Section 12-20-14, and will probably resume drilling on this 730-foot hole. The Pacific Oil Co. spudded in a new well, No. 107 on Section 25-20-14, and should finish it in the near future as a shallow producer. The Coast Range Oil Co. is making rather slow progress with No. 16 on Section 17-19-15 and, although the company has been working for several months, only 1,665 feet of hole has been made to date. The delay has been due to mechanical trouble. There were

TANKER SHIPMENTS FROM LOS ANGELES TO ATLANTIC AND GULF COAST PORTS

Following is a list of tankers, date departed, destination, kind of cargo and amount in barrels:

E. T. Bedford, March 10, New York, crude	108,477
Agwimex, March 14, Baltimore, crude	91,180
Samuel Q. Brown, March 14, New York, crude	75,414
District of Columbia, March 15, Boston, crude	75,828
Coastwise	
K. R. Kingsbury, March 9, Richmond, crude	82,711
El Segundo, March 9, San Diego, refined	29,860
Los Alamos, March 10, Portland, refined	37,881
W. S. Miller, March 10, Richmond, crude	73,642
Deroche, March 10, Avon, crude	75,101
Warwick, March 11, Martinez, refined	40,234
W. S. Rheem, March 11, Richmond, crude	92,840
Robert E. Hopkins, March 11, Avon, crude	75,118
El Segundo, March 11, Willbridge, refined	32,546
Mojave, March 13, Seattle, fuel	70,491
K. R. Kingsbury, March 13, Richmond, crude	82,836
Oleum, March 13, San Diego, fuel	40,718
J. A. Moffett, March 13, Willbridge, fuel	63,967
H. M. Storey, March 13, Richmond, crude	94,511
La Purisima, March 14, San Diego, refined	31,275
Richmond, March 14, Seattle, fuel	64,538
Cathwood, March 15, Martinez, crude	73,221
Exports	
Varanger (Nor.), March 10, London, refined	100,760
Scalaria (Br.), March 10, China, refined	60,971
War Nizam (Br.), March 12, Japan, fuel	55,323
Frank G. Drum, March 14, Honolulu, fuel	62,487
Deroche, March 15, Honolulu, fuel	81,230
Montebello, March 15, Balboa, fuel	70,715
From Ventura	
Frank H. Buck, March 11, Avon, crude	62,948
From Port San Luis	
Los Angeles, March 13, Oleum, crude	73,996
From San Francisco	
Atlas, March 10, Eureka, refined	15,811
Alaska Standard, March 10, Seattle, refined	9,062
Swift Arrow, March 11, Fall River, tops	78,146
Charlie Watson, March 11, Seattle, refined	13,477

no new wells started in the Lost-Hills-Belridge area, nor was work resumed on any of the suspended drillers during February. Conditions have been rather quiet in this territory and with the exception of two drillers, the Universal's No. 44, Section 32-26-21 at 685 feet, and the Bear State's No. 13, Section 34-28-20 at 600 feet, things are at a standstill. There is a total of 5,000 bbls. a day shut in and no immediate change is anticipated within the next few months in the status of the wells affected.

Wheeler Ridge

Neither the Standard nor General Petroleum, the only two successful operators in the Wheeler Ridge Field, finished a new well during the past month. Both, however, should augment their present list of producers within the near future. The General Petroleum is working on one driller, No. 3 Gillon, Section 28-11-20, and should complete this 4,306-foot hole shortly. The Standard has four drillers to its credit and two rigs erected for future use. The company's deepest hole is No. 10 at 4,350 feet, while the shallowest is No. 18, recently spudded in and now at 1,406 feet. Between these two are No. 11 at 4,135 feet and No. 13 at 2,225 feet. Nos. 10, 11 and 13 are on Section 28-11-20, while No. 18 is located on Section 27-11-20. The daily production of this field during February will not show any great change from that reported during January.

Ventura

A check of the completions recorded in the Ventura Field during the past month shows a lack of uniformity and while three of the five wells finished during the period in question were large, they need cause no alarm because of the difficulty encountered in drilling and the limited amount of highly productive acreage. The Associated, by completing two large wells within a short space of time, recently directed attention to the Ventura Avenue Pool and while the results obtained stimulated development work, only the Shell, General Petroleum and Associated could benefit to any extent. The Ventura Avenue Field has been contributing 1,000-bbl. wells quite regularly during the past few years but because of the heavy production in the flush pools of southern California, it has not received the attention which it really merits. The Associated, Shell and General Petroleum were, of course, centering their attention in southern California and naturally restricted drilling at Ventura. These companies are now transferring their attention to Ventura and each should finish several good wells in this field during the next six months.

The Associated's last completion was No. 16 Lloyd, which came in flowing 4,415 bbls. from 5,280 feet, an even mile in depth. The company has three drillers on this lease at present, No. 15 at 994 feet, No. 17 at 3,935 feet and No. 18 at 3,391 feet. The General Petroleum finished No. 5 Notten during February, flowing 1,500 bbls. from 4,116 feet. No. 6 on this lease is going ahead at 3,150 feet, while a rig has been erected for No. 4-A. The Shell brought in No. 7 Taylor from 4,472 feet and increased its daily production 1,200 bbls. Work was immediately started on No. 8 and indications point to still further drilling on this lease. The Shell has five drillers on the Gosnell property and will probably spud in two or three more within the next few weeks. In contrast with the large wells added by the Associated, General Petroleum and Shell, the Calumet Oil Co.'s well No. 14, on Section 3-3-19 and the Oak Ridge Oil Co.'s No. 14 on South Mountain were exceedingly small. The Calumet finished a 50-bbl. pumper at 2,680 feet, while the Oak Ridge completed a 125-bbl. pumper at 4,237 feet.

Rosecrans

There was only one well actually put on production at Rosecrans during the past seven days, although one or two others were given partial completion tests. No. 1 Books of the Mohawk Oil Co. was the only producer to actually remain on production. It was drilled to 4,362 feet and came in flowing through a 1-inch bean under a pressure of 460 pounds. The initial output, 975 bbls., tests 37.2 degrees and shows a cut of 1 per cent. No. 1 Mahler, the company's other producer, has been flowing quite steadily for the past several days at the rate of 500 bbls. The Mohawk is now devoting its attention to the two remaining holes, No. 1 Bateman at 1,130 feet and No. 1 Dixon at 700 feet. E. J. Miley gave both No. 4 Athens, at 4,985 feet, and No. 5 Athens at 4,727 feet, a try for production but was unsuccessful in finishing either. The former started off flowing at the rate of 2,000 bbls. a day of clean oil but water broke in two hours later and the cut jumped from 1 per cent to 65 per cent. It was flowing through a ¾-inch bean under a pressure of 600 pounds just previous to the water intrusion. The flow was killed and another cement job will be attempted on the 4¾-inch at 4,913 feet. No. 5 Athens started to flow at the rate of 50 bbls. an hour but sanded up before the expiration of the third hour and will require a cleanout before another test can be made. The oil produced was clean and tested 37.2 degrees, indicating that a water shut off had been affected. Miley should have this hole on production within a short time, as he is a very capable driller.

The Petroleum Midway cored an oil sand in two of its six wells, No. 1 Baskin at 5,060 feet and No. 1 McCormick at 4,946 feet. The company will undoubtedly give these holes a test within a short time and should also be in a position to try out No. 1 Folsom, now at 5,146 feet. No. 1 Rosecrans of the Hercules Gasoline Co., offsetting the Marine Oil Co.'s No. 32 Athens, came in flowing 1,000,000 feet of dry gas from 4,336 feet, but the flow was of short duration. The company reentered the hole and drilled ahead to 4,405 feet, at which depth a fair sand was cored. The Henderson Petroleum, operating very successfully heretofore at Long Beach, is entering this field for the first time and is building three rigs, all of which, it is reported, will be spudded in as quickly as possible. The San Joaquin Oil Co., Paul Getty, spudded in No. 3 Athens during the early part of the week and reports 2,210 feet of hole. J. B. Dabney resumed work of his No. 1 Athens, which has been standing idle for the past four months at 5,528 feet. Dabney, one of the early pioneers in this northwest area, is resuming work as the result of the showing made by No. 1-A Athens of the Julian Petroleum.

Inglewood

Three new wells were put on the beam at Inglewood during the past week, the Mohawk, Petroleum Midway and Standard each completing one new producer. The Mohawk brought in No. 2 Machada, its second well in this area, at 2,540 feet It was somewhat deeper than No. 1 but is experiencing the same trouble with sand. It started off pumping 182 bbls. of 17.1 gravity oil which cut 5 per cent sand. The Petroleum Midway secured its first production at Inglewood by completing No. 1 Smith at 2,546 feet, using a 6¼-inch oil string carrying 235 feet of 80 mesh screen. The initial production, 168 bbls., tests 18.1 degrees and shows a cut of 1 per cent. No. 2 on Vickers Lease No. 1, a 226-bbl. pumper, was the Standard's contribution to the field's list of producers. The oil, which is coming from 1,520 feet, tests 18.1 degrees and shows a cut of 3 per cent. Judging by the number of rigs being erected, the Standard contemplates a substantial production in this area and is preparing to push development work. On Los Angeles Investment Lease No. 1 the company has rigs up for Nos. 4, 5, and 6. On Vickers Lease No. 1 rigs are standing for Nos. 4 and 5, while on Vickers Lease No. 2 rigs have been erected for Nos. 2 and 3.

The Associated spudded in No. 1 Vickers during the early part of the week and is building the rig for No. 2. Oscar Howard is rigging up No. 2 Machada and will probably start work within the next few days. The Pan American and Petroleum Securities have resumed work following a short temporary suspension because of a water shortage and each has staked several new locations. The Pan American is cleaning out No. 2 Sentous at 2,061 feet, building a rig for No 3 and drilling ahead in No. 7 at 1,900 feet. The Petroleum Securities is building a rig for No. 2 Cone and drilling ahead in No. 3 at 1,300 feet. No. 4 has just spudded in, while No. 6 is being rigged up. The company has staked location for its first well on the Moyneir property and should haul in material within the coming week. The Universal Consolidated Oil Co. has not even found a color in No. 1 Youngsworth, although 2,700 feet of hole has been made to date. Unless something is picked up before the 3,000-foot level is passed the well will probably be dry. The Superior Oil Co. has started constructing the rig for No. 1 Picot, which will be an offset to Oscar Howard's No. 2 Machada.

Dominguez

The Shell's field force had a busy week at Dominguez and succeeded in finishing two new wells on the Reyes Lease. No. 23, drilled to 4,101 feet and finished with a 6¼-inch oil string carrying 387 feet of 80 mesh Smith screen, came in doing 847 bbls. a day. The oil, which tests 32.1 degrees and shows a cut of 1 per cent, is flowing through a 1-inch bean under a pressure of 375 pounds. No. 25 Reyes was completed at 4,108 feet and finished with a 6¼-inch oil string carrying 390 feet of 80 mesh Smith screen. The well, flowing through a ⅝-inch bean under a pressure of 425 pounds, tanked 809 bbls. of 31.2 gravity oil during the first 24 hours' test. No. 21 Reyes is being prepared for a test following a recement job on the 6¼-inch at 3,945 feet. No. 26 Reyes has just been recemented at 3,655 feet. On the Manuel Lease, No. 1 is standing plugged at 4,369 feet, while preparations are being made to recement No. 5 at 4,014 feet. The Marland's deep test, No. 7 Domingues, has just passed the 4,000-foot level and it is the intention of the company to carry No. 7 to a sufficient depth to thoroughly test out the company's lease for deep production. The Henderson Petroleum has plugged back No. 1 Susana from 4,320 feet to 4,155 feet and will make a test within the near future of the sand found between 4,115 feet and 4,148 feet. It is not believed that the company will be successful in securing commercial production at this depth.

Torrance

The Superior Oil Co. finished two of the four new wells brought in at Torrance during the past seven days. They were both on the Torrance lease, No. 59, a flowing well, and No. 61 a pumper. The former, drilled to 3,790 feet and finished with a 6¼-inch oil string including 200 feet of 60 mesh screen, is flowing through a ½-inch bean under a pressure of 480 pounds. The maximum output, 595 bbls., tests 18.2 degrees and shows a cut of 2 per cent. No. 61 Torrance was put on the beam at 3,793 feet after being finished with a 6¼-inch oil string carrying 301 feet of 60 mesh screen. It started off pumping 232 bbls. of 16.1 gravity oil which showed a cut of 2 per cent. The Petroleum Securities, Doheny, finished a small pumper when well No. 17 on Kleinmeyer Lease B was put on the beam. It was drilled to 3,775 feet and finished with a 6¼-inch oil string landed on bottom. The initial output, 92 bbls. tests 15.8 degrees and shows a cut of 6 per cent. No. 10 on this lease is making hole at 1,500 feet, while No. 16 is going ahead at 3,265 feet.

The Chanslor-Canfield Midway Oil Co. put No. 32 Del Amo on the beam at 3,675 feet and secured a 146-bbl. pumper, the oil testing 17.4 degrees and showing a cut of 3 per cent. The company is working on three other holes on the Del Amo property, No. 16 at 500 feet, No. 36 at 2,980 feet and No. 42 at 2,935 feet. No. 48 is a rig and No. 54 a location. The General Petroleum after redrilling and cleaning out No. 20 Poggi, was unsuccessful in securing an oil production but did get a flow of gas. The company should have better luck with No. 4 Poggi, now at 3,708 feet, No. 6 at 2,670 feet and No. 7 going ahead at 2,880 feet. The Shell is building a new rig for No. 3 Frenger and should spud in some time within the next two or three weeks. Nos. 1 and 2 on this lease are pumping 85 bbls. and 50 bbls. respectively.

Huntington Beach

Huntington Beach experienced a revival of old times last week as the result of the completion of two excellent producers, one of which was a workover. The largest well finished was No. 19 Bolsa Chica of the Standard Oil Co. which gauged 1,572 bbls. during the first 24 hours. The oil, which tests 28.2 degrees and shows a cut of 1 per cent, is flowing through a ½-inch bean under a pressure of 370 pounds. It was drilled to 4,640 feet and finished with a 6¼-inch oil string carrying 981 feet of 80 mesh screen. The well is holding up unusually well, and, since the gas pressure is increasing, there should be no immediate change in production. As a matter of fact, this property is unusually productive and noted for its longevity. No. 1 Bolsa Chica, the initial well, finished in 1920, is still flowing 600 bbls. each day. It has been on continuous production, with one or two

(Continued on Page 146)

News of Mexican Fields

By George Blardone

TAMPICO, Mexico., March 20.—Huasteca Petroleum Co., Mexican Petroleum), scored an old fashioned South Fields gusher St. Patrick's Day, when its No. 44 Tierra Blanca literally "blew in" a well of tremendous potential head. It is reckoned that the oil flow equalled the rate of 100,000 bbls. the day. The pay was tapped at a surface depth of 2,086 feet, the sub-sea level being 1,951 feet, which marks it a shallow well for this sector, other completions considered.

When the pay was tapped by the drill the oil column shot some 400 feet over the derrick, the tools going 200 feet in the air. The force was such that the cable was snapped off at the socket. What with the escape of gas and oil it was some two hours before the well was shut in. The closed pressure is 700 pounds.

International Petroleum Co.'s No. 158, Lot 5, in the Cacalilao sector of the northern fields, is rated good for 4,000 bbls. at 2,015 feet.

In all there were 28 wells completed during the past week, 25 being in the northern fields. The list of failures follow: La Corona Petroleum Co.'s Nos. 94 and 95 Ojital, in the old Panuco Field, both drilled into salt water at 1,900 and 1,830 feet, respectively. In Cacalilao, No. 166, Lot 4 did the same at 2,429 feet. In Lot 5 Cacalilao, International Petroleum Co.'s No. 109, at 2,125 feet; No. 149, at 2,130 feet; No. 150, at 2,308 feet; No. 153 at 2,200 feet, were dry holes, and Nos. 156 and 162 are salt water wells at 2,400 and 2,365 feet respectively. Mexican Sinclair Petroleum Corp.'s No. 147, Lot 3 Cacalilao, developed fluid at 2,130 feet, and is being plugged back to 1,900 feet to see if it will produce in paying volume from an upper stratum, and its No. 104, Lot 2 is salt water at 1,848 feet. Island Oil & Transport Corp.'s subsidiary, No. 1, Lot 12 West Maguabes, in the old Panuco, drilled into a small show of salt water at 2,280 feet, and it is being abandoned. Mexican Gulf Oil Co.'s No. 71, Lot 1 Cacalilao, is a failure at 1,800 feet. In Lot 4 Cacalilao, Transcontinental Petroleum Co.'s No. 138 is a duster at 2,080 feet; No. 150 is a failure at 2,040 feet; No. 157 drilled into salt water at 2,330 feet; No. 164 is a failure at 2,090 feet. and in the Paciencia, just above Cacalilao, No. 8 Paciencia drilled into salt water at 2,320 feet.

Among the miscellaneous north field tests, Corcovado scored three failures, Intermex Oil Co.'s No. 2, finishing up a duster at 3,100 feet; Agwi Companies

(Continued on Page 154)

Rocky Mountain Area

By F. B. Taylor

New deep oil field expected on Dutton Creek Dome, between Rock Creek and Rex Lake Fields, Wyoming. Midwest Co.'s 25,000,000-foot gasser near Rangely may discover mother pool. Midwest also has producer in stray sand on Illes Dome. Fort Collins well of Union making 2,000 bbls.

CASPER, Wyo., March 21.—The Dutton Creek Dome, lying between Rock Creek Field and Rex Lake, on the county line between Albany and Carbon counties, in Wyoming, has the earmarks of a new oil field from what the geologists have reported.

There is very little indication of a structure on the surface here, but Max Ball, head of the Marine Oil Co. and other prominent oil men were familiar enough with the territory to consider that a structure should lie there and such structure might be covered over with the Tertiary deposit.

The Midwest and Mr. Ball went over the possibilities thoroughly and jointly and the Midwest sent in a core drilling machine that was able to drill to a depth of about 500 feet. This machine drilled some 30 or 40 holes over the area and from the knowledge thus gained, it appears there is a good looking dome under the surface there and that the chances are good for its becoming an oil field of prominence.

The Midwest is now moving in a rig for a well and drilling is expected to start in a few days. It is expected this will be found a deep field as the Rex Lake and Rock Creek fields are between 3,500 and 4,000 feet in depth. The production is looked for in the Muddy sands that lie below the Froniter sand. The Muddy produces oil at Rock Creek, Rex Lake and down in Colorado at Wellington and Fort Collins. Below the Muddy sand is the Dakota and Lakota and then the black oil sands still deeper.

The new structure is considered to lie in a long oval, with the axis approximately northwest and southeast. The dome is mainly in townships 18 and 19, in ranges 77 and 78, and the productive area of the structure is expected to take in parts of sections 35 and 36-19-78 and section 1-2, 11, 12 and part of 13-18-78 and sections 6, 7 and 18-18-77. This would embody a field of productive area of about 8 square miles.

May Be Mother Pool

The Midwest Refining Co. drilled in another big gasser near Rangely, Colo., about 9 miles from the Utah line, Section 30-2-102, Rio Blanca County. The gas was found in the Dakota sand at 2,954 feet and it is now blowing wild and out of control. It is expected that if the well was to be shut in on the casing, it would lift all the strings so the pipe will be anchored with concrete before any effort will be made to shut in the pressure. This will take several days for the cement to set.

The well is estimated at 25,000,000 feet at present and the oil men hope it is the discovery well of the mother pool that furnished the oil for the Rangely Field in Colorado. This field is a shale operation of shallow depth that produces a high grade crude from the shale at an average depth of 700 to 900 feet. It has been making some production for many years and the oil men are of the opinion this shallow oil comes from a mother pool in some sand deep down. The Midwest well is the first test to reach the Dakota sand and the gas is quite wet, indicating to some the mother pool lies near the hole.

The Western Exploration Co., the subsidiary drilling and developing firm of the Consolidated Royalty Oil Co. of Casper, has completed a contract with the oil purchasing companies that calls for Mid-Continent market prices for all crudes produced by the Western Exploration. This is considered a straw showing the direction of the wind regarding oil prices in Wyoming fields for this season. Up to date the Wyoming crudes have been under a differential in completion with the Mid-Continent oils, but recently The Texas Co. and other independents were reported as quoting Mid-Continent prices for contracts for oil in Salt Creek Field. With a rising market and but a small measure of wildcatting in progress in this region, the refiners in this part of the country are having trouble keeping their supply of crude up to the capacity of their plants.

Stray Sand Produced

The Midwest Refining Co. on the Illes Dome of the Moffat Field in Moffat County, Colorado, has what seems to be a producer in a stray sand. This well is located on Section 22-4-92 in the Moffat Field and found this stray sand, which consisted of two streaks each about 4 feet thick, at 2,350 feet. It is considered that this stray sand is probably a streak of sand in the Frontier formation and would correspond to some of the Wall Creek sands of the Wyoming fields.

In Fort Collins Field, the Union Oil Co. of California has increased its daily production from the two producers in the Fort Collins Dome, to 2,000 bbls. per day. Both these wells are beaned down to a minimum of production at present in order to keep back floating sand, as the Union officials appear to fear this danger. It is noticeable in the Wyoming oil fields that practically all the oil men coming to this region from California have a mortal dread of floating sand, but the Wyoming and Colorado wells do not appear to contain this element of danger to production as much as the California oil men credit them and there are but few instances where wells in the Rocky Mountain region make floating sand in quantities to interfere seriously with the production of the wells.

The Hatfield Oil Co.'s well on the Eight Mile Lake Dome in Carbon County, Wyoming, has landed a string of 6⅝-inch casing at 3,710 feet and expects to drill it in about two more weeks. This well is proving to be deeper than was expected and it is located farther down the side of the structure than No. 1.

The Land Office at Douglas is to be moved to Cheyenne and several other land offices through this part of the country are to be moved to more central points or abolished. The moving of the Douglas office to Cheyenne is looked upon with disfavor by the Casper oil men on account of the longer distance.

New York Oil Co. Report

No confirmation has been received yet of the rumored purchase of the Central Pipe Line Co. by the New York Oil Co. The company's annual shows it has acquired additional properties in Montana, Colorado, Kansas and Washington. In September, the New York Oil Co. purchased the large gasoline absorption plant of the Fargo Western Oil Co. in the Salt Creek Field and has been operating this plant since. New acreage acquired during the year included 120 acres in the Kevin-Sunburst Field, purchased outright, leases aggregating 320 acres in the same field, and royalty interests under 280 acres; also in the Sunburst district; 4,700 acres in leases on patented land in the Kansas oil fields; 320 acres in the Fort Collins district. The Washington property acquired by the New York consists of leases on 8,000 acres on the Aberdeen-Hoquiam structure.

The report states that the company has royalty or working interests in 248 wells in the Salt Creek Field, and that drilling programs for 1925 call for the completion of nearly 100 more wells on properties in which the New York Oil Co. is interested. Production from company properties in the Poison Spider Field is given at approximately 4,000 bbls. a month, while developed production of four light wells in the Iron Creek Field is given at 1,500 bbls. monthly. While no additional pipe line were laid during the year, over 4 miles of line were added to the company's gas distribution system, and a substantial increase is noted in the number of gas consumers.

Weather Starts Wildcatters

The exceedingly fine weather has encouraged wildcat operators to resume work. The Mutual Oil Co. drilling for the joint account of the Consolidated Royalty Oil Co. the Western Exploration Co. and its own interests, on the Wallace Creek Dome, will be at work again within a week after a shutdown of nearly three months. The Wallace Creek structure is in southern Natrona County, not far from the Rattlesnake Mountains.

The Atlas Oil Co. test on Split Hill, northeast of Douglas, has reached a depth of over 600 feet. This well is northwest of the Lance Creek Field, in new territory.

The Marland Oil Co. has two test wells in the Wyoming at present. One is on the Notches Dome in Natrona County, and the other on Sage Creek, in the Rawlis district. The Notches Dome cannot be considered wildcat territory, as the structure has one producing well and a pipe line, both the property of the Midwest Refining Co. The Marland well is down about 1,200 feet, and is reported to have picked up the Dakota sand at a higher level than it was found in the Midwest well. The Notches Dome produces black oil.

The Utah Oil & Refining Co. No. 2 on the Black Mountain structure, Thermopolis district, has resumed drilling after striking what appears to be commercial production in the Embar sand. The well will be carried to the Tensleep, which

(Continued on Page 146)

News from Fields of Canada

By Victor Lauriston

CHATHAM, Ont., March 21.—In the Irma-Wainwright Field, east central Alberta, British Petroleum's No. 2, the discovery well, on Section 30-46-6w4, which was cleaned out some time ago, is reported to have considerably increased its production, flowing by heads. All available tankage has been drilled. British Petroleum's No. 4. is still flowing by heads. No official estimate of production has yet been made public. Western Consolidated Oils, Section 20-45-6w4, is resuming work on its unfinished test, which is down about 1,200 feet, and is bringing in a second outfit and will locate a new test, probably an offset to the British Petroleum's producers. The Interior Oil Co. recently incorporated under a Dominion charter with $3,000,000 capitalization, has taken over the leases and unfinished test of the Wainwright Oil Producers Syndicate, Section 36-44-7w4. This test is reported shut down around 400 feet but will resume drilling as soon as the weather is favorable.

A new area in northern Alberta will be tested this year by International Oils, Ltd. of Edmonton, which is taking over 30,000 acres of leases in the Lesser Slave-Athabaska region.

In southwestern Alberta, Community Oil Wells, Ltd., Section 19-14-1w4, in the Many Island Lake Field is arranging to resume drilling late in March or early in April. A new hole will be carried down from 1,700 feet to a depth of 3,000 feet or more. The Canadian-American Oil & Gas Co. is reported to be assisting in the completion of this well as a deep test of the Many Island Lake Field. The Canadian-American, which last year got some gas in No. 1 well on Section 31-13-1w4 will this year drill two additional gas wells on its holdings.

In the Medicine Hat Field, the city of Medicine Hat has secured from the Dominion Government additional leases, preliminary to concluding its contract with A. E. Roth of Independence, Kans. for a deep test to be drilled to 3,200 feet.

Turner Valley Field

In the Turner Valley Field, southwest of Calgary, D. A. McDonald and associates of Vancouver, B. C., have secured 80 acres of oil leases in Section 5-20-2w5 from J. H. Goodwin and associates of Calgary. The holdings are not far from the Royalite No. 4 well, and the MacDonald interests are planning to drill four wells, No. 1 to commence work easily this spring. The Indiana-Alberta Oil Co., incorporated in Indiana, has been registered in Alberta, and is reported to be planning some development in the Turner Valley Field.

In the Sweetgrass district, southern Alberta, Contractor Jack Reynolds is assembling equipment and supplies for the deepening and completion of Canadian Oil & Refining Co. (Rogers-Imperial) well on Section 29-1-11w4. This test got a heavy gas flow at about 2,500 feet, is now down 2,700 feet and will be deepened for oil. It is claimed the test has reached a cap-rock immediately overlying the Ellis sands, which are considerably deeper in Alberta than in the northern Montana fields.

West of Coutts, the L. R. Olson syndicate of Coutts will drill a second test on the structure tested several years by the Imperial Oil, Ltd. Red Coulee well on Section 5-1-16w4. The Olsen test will be drilled about 3 miles west of Coutts. Imperial Oil, Ltd. got a showing of oil in its test, but no commercial production, and the territory was abandoned.

To Double Refinery

The Alberta Refining Co. is arranging to double the capacity of its 500-bbl. refinery at Coutts. The plant operates on Kevin-Sunburst crude.

In the Ontario fields, the Union Natural Gas Co. test for gas in the Tilbury sand on the Barr farm, back of the Lake front, in Kent County, is reported drilling at 835 feet. Owing to unfavorable flood conditions in the lowlands of the Dover Field, no work has yet been done on the new deep test of the Trenton limestone in Dover Township.

In Lambton County, Dr. E. B. Blain of Hamilton is reported leasing territory near Forest, holdings having been secured along concession 12, Plympton Township, between the Uttoxeter sideroad and Aberarder. The area will be tested this season, probably for shallow oil production.

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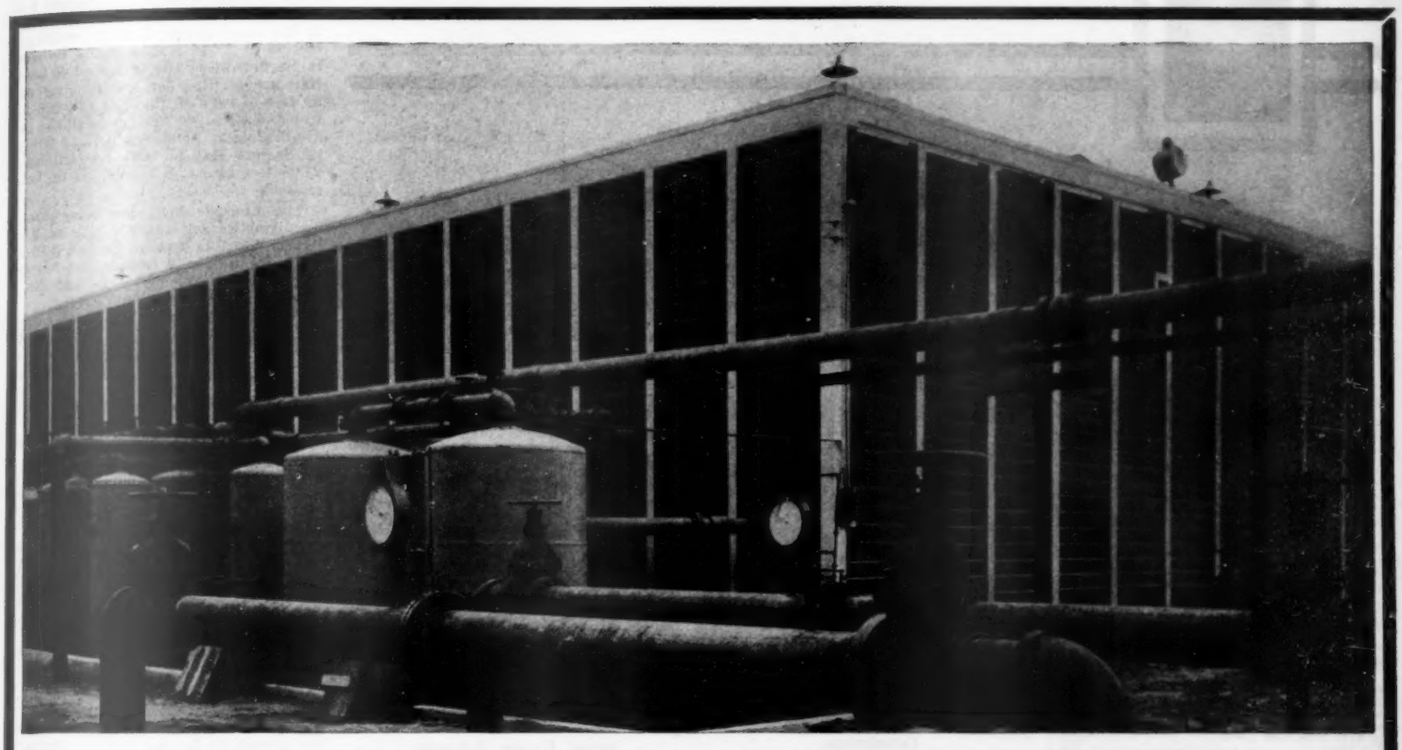

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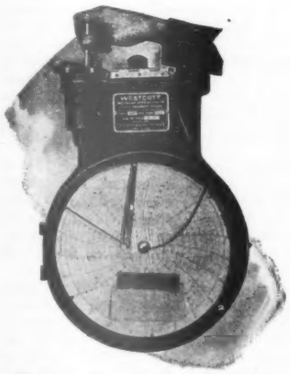

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Write for Bulletin No. 120.

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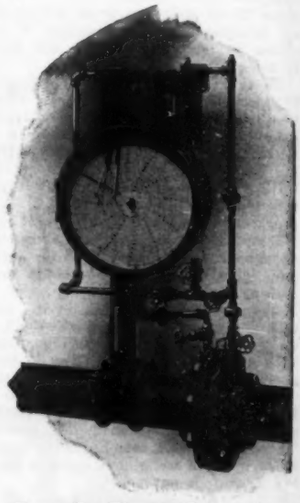


Type D, Flange Connection

General Office and Factory—Erie, Pennsylvania, U.S.A.

METRIC METAL WORKS

North Louisiana-Arkansas

By M. L. Vaughn

Smackover heavy increases 7,500 bbls., with 80 new locations and 13 wells being drilled deeper. Oil show in De Soto Parish, Extension of Sarepta-Spring Hill gas area. Four completions in Union County, with 5,475 bbls. and 13 producers in Ouachita County, with an aggregate of 1,245 bbls.

SHREVEPORT, La., March 23.—Smackover heavy continues to lead in production in Arkansas, and an increase of 7,500 bbls. over last week's output brings this district up to 73,205 bbls. The total production in the Arkansas fields was 117,975 bbls., distributed as follows:

Arkansas

El Dorado	9,290
Nevada County	1,590
Smackover light	31,865
Smackover heavy	73,205
Stephens	2,025
Total	117,975

In the North Louisiana Field, the Bellevue territory shows an increase of 385 bbls. over last week. There is also a slight increase in the Caddo heavy oil district. The daily average for north Louisiana was 50,325 bbls., distributed as follows:

North Louisiana

Bellevue	3,940
Caddo light	9,488
Caddo heavy	2,265
Cotton Valley	8,276
De Soto and Red River	4,182
Elm Grove	721
Haynesville	14,581
Homer	6,872
Total	50,325
Total both fields	168,300
Increase	6,754

New Work in Smackover

An outstanding feature of the week's activities is the increased amount of exploration into the deep strata of the Smackover Field. Approximately 80 new locations have recently been made, and some 13 old wells are being drilled deeper, bringing the total number of operations in the deep sand in this section to some 138 tests.

In the Ouachita territory leasing has been revived and some Ouachita County land owners have got some attractive prices for land in Section 23-15-16 and Section 19-15-17, Louisiana Oil & Refining Corp being one of the lessors. This leasing is evidence that a few failures in this territory have not dampened the enthusiasm, as the well drilled by White & Massey in the southeast of northwest of northwest in Section 23-15-17, located due north of the Gulf Reynolds No. 4, making 6 bbls., came in dry, also No. 1 Berg of J. D. Reynolds, in the southeast of northeast in Section 13-15-17, has so far failed to make a paying producer at a depth of 2,142 feet, after 65 feet of good looking sand had been encountered.

The Gilliland Oil Co. reached no pay in this territory, in its test at 2,400 feet, and is planning to drill to 3,500 feet. This test is being watched with interest, as some small wells have come in around the 2,600-foot pay.

Oil Show in De Soto

Some time has passed since De Soto Parish has attracted any attention, and the show of oil that has been made in the southeast corner of this parish, in Section 22-11-12, 2 miles north of Pelican, at 2,902 feet, is the best report from this territory in many months. This test, being drilled by Ulrey and others, is 1 mile northeast of the Producers Oil Co.'s No. 1 Joiner, which came in a few years ago making 5,000 bbls. Ulrey and others struck their pay sand some 65 feet higher than the Producers; their well is also 3 miles northeast of the old Fisher-Boone well, which is still a small pumper.

The northern Webster Parish, where the Sarepta Spring Hill Gas district is located, an extension of the field has been made by the completion by Butler & McMurray for the Simms Oil Co. of No. 1 Waller. This well extends the field 1 mile to the northwest and is located in the southwest corner of the northwest and the northeast of Section 28-23-11, and is estimated as a 50,000,000-foot gasser from a depth of 2,695 feet, the bottom of the drill being 4 feet in the sand.

In the territory adjoining the Bethany Field, blocking of acreage and drilling is being carried on to a great extent. J. P. Flournoy, Jr. is drilling a well at a depth of 1,000 feet on a 3,400-acre tract in Section 8-16-15. This territory is joined at the south by the Ridge Oil Corp., composed of George O. Baird and H. C. Flinchbaugh, and capitalized at $50,000. The Ridge Oil Corp. has 9,000 acres in different sections and Township 16, Range 15, also in Township 15, Range 15, located west of Keithville and 5 miles east of the Bethany Gas Field, and drilling is to be started by June 1.

Completions

Union County, Arkansas

There were only four wells completed in Union County during the past week, with an aggregate initial production of 5,475 bbls.

Hickman and others completed No. 8 Graves, Section 3-16-15, flowing 700 bbls. at 2,372 feet.

W. W. Jones and others completed No. 1 F. G. Murphy, Section 18-16-15, pumping 75 bbls. at 2,096 feet.

Murdock and others completed No. 3 Bilyew, Section 8-16-15, at 2,493 feet, flowing 700 bbls.

The Sunny Jim Oil Co. completed No. 3 Flenniken, Section 9-16-15, flowing 4,000 bbls. at 2,493 feet.

Ouachita County, Arkansas

Completions in the Smackover Field, in Ouachita County, numbered 14, with 13 producers having an aggregate initial production of 1,245 bls. and one failure.

The British Allied Estate abandoned No. 1 Lampkin fee, Section 6-13-18, at 2,120 feet.

The Cumberland Petroleum Co. completed No. 5 Reynolds, Section 23-15-17, flowing 150 bbls. at 2,295 feet.

Giles and others completed No. 1 Neeley, Section 26-15-16, at 2,061 feet, flowing 60 bbls.

Gray and others' No. 3 Myar, Section 32-15-16, came in a 15-bbl. pumper at 2,258 feet.

The Gulf Refining Co. completed No. 9 Fincher, Section 33-15-16, at 2,247 feet, pumping 25 bbls., and No. 4 Reynolds, Section 23-16-17, at 2,301 feet, pumping 45 bbls.; it also completed No. A-11 Werner, Section 26-15-17, at 2,298 feet, making a 90-bbl. pumper.

R. L. Hunt and others completed No. A-4 Myatt, Section 26-15-17, making an 80-bbl. pumper at 2,375 feet.

Lea Trustee completed No. 2 Smith, Section 26-15-17, pumping 120 bbls. at 2,401 feet.

The Standard Oil Co. of Louisiana brought in No. 2 J. H. Alphin, Section 2-16-15, pumping 200 bbls., at 1,991 feet.

The Sun Oil Co. completed No. 4 Hardin, Section 27-15-16, at 2,257 feet, pumping 70 bbls.

The Sure Oil Corp. completed No. 1 Snyder, Section 24-15-15, at 1,962 feet, pumping 200 bbls.

The Texas Co. completed No. 8 Berry, Section 33-15-15, at 1,993 feet, pumping 100 bbls.

Timberlake and others completed No. 2 Green, Section 23-15-17, pumping 90 bbls. at 2,348 feet.

Bossier Parish

The Palmer Corp. completed No. B-8 Hodges, in Section 25-16-12, at 1,892 feet, estimated making 10,000,000 feet of gas.

Bellevue Field—Bossier Parish

G. W. Weatherbee got salt water in No. F-5 Bliss and Weatherbee fee, in Section 23-19-11, and abandoned.

Caddo Parish

Ford and others abandoned No. 1 Agurs, in Section 15-17-16, at 1,915 feet.

Haynes Brothers completed No. 1 Louisiana Live Stock, in Section 8-19-16, at 2,330 feet, pumping 12 bbls.

Ouachita Parish

Montgomery and others completed No. 1 McHenry, in Section 12-19-4e, at 2,159 feet, estimated making 33,000,000 feet of gas.

Grant County Arkansas

Hill & Arnold abandoned No. 1 Meek, in Section 8-4-12.

Webster Parish

The Crusader Oil Producing Co. completed No. B-9 Hope estate, in Section 24-21-10, pumping 120 bbls. at 2,516 feet; No. B-11 Hope estate, in Section 13-21-10, making a 10-bbl. pumper at 2,542 feet, and No. B-14 Hope estate, in the same section, making a 60-bbl. pumper at 2,519 feet.

The Fortuna Oil Co. completed No. 2 W. Cox, in Section 15-21-10, pumping 300 bbls. at 2,538 feet, and No. 1 Pine Woods, Lumber Co., in Section 27-23-9, making 15,000,000 feet of gas at 2,624 feet.

The Louisiana Oil Refining Co. got salt water in No. 1 Armoe in Section 21-23-9 at 2,798 feet and abandoned the test.

The Ohio Oil Co. completed No. 23 Bodcau, in Section 28-21-10, at 2,577 feet and it is pumping 200 bbls.

The Palmer Corp. completed No. 2 Tillman, in Section 28-21-10, making 3,000,000 feet of gas and 40 bbls. of oil at 2,574 feet.

Drilling Operations

Union County Arkansas

The Amerada Petroleum Corp. has derricks up for Nos. 3 and 4 Calloway, in Section 4-16-15, is moving in rig for No. 5 Lyell, in Section 3-16-15, and are down 300 feet in No. 2 Calloway, in Section 4-16-15.

J. A. Alphin has derrick up for No. 1 Fee, in Section 4-16-15.

The Arkansas Fuel Oil Co. is drilling in No. 4 Ferguson, in Section 6-16-15, at 2,080 feet; waiting for standard rig with 8 feet of sand in the hole at 2,280 feet in No. 6 LaGrone, in Section 1-16-17; drilling at 1,690 feet in No. 7 LaGrone, in Section 1-16-17; has derrick up for No. 3 Murphy, in Section 8-16-15; will deepen No. 1 Scott, in Section 1-16-17, with tools from 2,250 feet, and is rigging up No. 2 Scott, in the same section.

The Arkrado Oil Co.'s No. 5 Hatfield, in Section 7-16-15, is flowing 12,000 bbls. of salt water, with 35,000,000 feet of gas at 2,562 feet, and has 5 feet of sand in the hole; Bailey & Trimble have derrick up for No. 3 Lawton, in Section 10-16-15. Belmont and others have derrick up for No. 1 Jones, in Section 21-16-15.

Bradley & Cazart are drilling at 1,900 feet in No. 1 Pate, in Section 16-17-17; Broderick & Calvert set 4-inch casing at 2,484 feet in No. 1 Murphy, in Section 8-16-15; J. W. Clark is rigging up No. 3 Palmer, in Section 9-16-15.

Contes & Sowell set 15-inch casing at 40 feet in No. 1 Bilyew, in Section 8-16-15; have derrick up for No. 2 Bilyew, in the same section, and are reaming to bottom at 2,544 feet in No. 1 Springer, in Section 36-17-16; Crawford & Sebastian are waiting for standard rig with 59 feet of sand in the hole at 2,006 feet in No. 8 Giller, in Section 14-16-15; they are drilling at 1,800 feet in No. 5 Graves, in Section 3-16-15, and are drilling at 2,005 feet in No. 6 Graves, in the same section.

The Crusader Oil Producing Co. is arranging to set 4-inch casing at 2,345 feet in No. 5 Graves, in Section 3-16-15; is rigging up No. 7 Graves, and has derricks up for No. 8 Graves and No. 5 Lyell, all in Section 3-16-15.

W. A. Dellmeyar has temporarily abandoned No. 1 Ezell, in Section 13-17-15, at 2,212 feet; Dyer Brothers set 6-inch casing at 2,217 feet in No. 4 Stout Lumber Co., in Section 31-15-16; Eason and others are moving in rig in No. 1 Palmer, and have derrick up for No. 2 Palmer, both in Section 9-16-15; Falls and others are drilling at 2,927 feet in No. 1 Johnson, in Section 1-18-17.

The Federal Petroleum Co. set 6-inch casing at 2,635 feet in No. 3 Childs, in Section 8-16-18, and is now drilling at 2,638 feet; set 15-inch casing at 40 feet in No. J-5 Flenniken, in Section 8-16-15; W. H. Gilliland is drilling at 1,250 feet in No. A-2 Hodges, in Section 8-16-16.

Grimes & Jones set 6-inch casing at 2,157 feet in No. 8 Van Hook, in Section 7-18-14.

Other Operations

The Gulf Refining Co. is rigging up No. 8 J. H. Alphin in Section 10-16-15; has derrick up for No. 9 J. H. Alphin, in the same section; set 15-inch casing at 81 feet in No. 6 Berry, in Section 8-16-15, and has derricks up for No. 9 Flannigan in Section 5-16-15, and No. 2 Holloway, in Section 6-16-16; is reaming to set 4-inch casing at 2,357 feet in No. 7 Hardy Murphy, in Section 5-16-15, and drilling gumbo at 2,349 feet in No. 9 Hardy Murphy, in Section 3-16-15; set 6-inch casing at 2,350 feet in No. 12 Hardy Murphy, in the same section and is down 60 feet in No. 14 Hardy Murphy, in Section 4-16-15; set 10-inch casing at 257 feet in No. 2 J. C. Murphy, in Section 9-16-15; bailing to test 10 feet of sand at 2,262 feet in No. 29 L. Werner, in Section 6-16-16; coring at 2,842 feet in No. 31 L. Werner, in Section 5-16-16; waiting for standard rig with 14 feet of sand in the hole at 2,255 feet in No. 34 L. Werner, in the same section; also waiting for standard rig with 9 feet of sand in the hole, and 500 feet of fluid, at 2,257 feet in No. 35 L. Werner, in Section 6-16-16, and is drilling No. 33 L. Werner, in Section 5-16-16, at 1,800 feet.

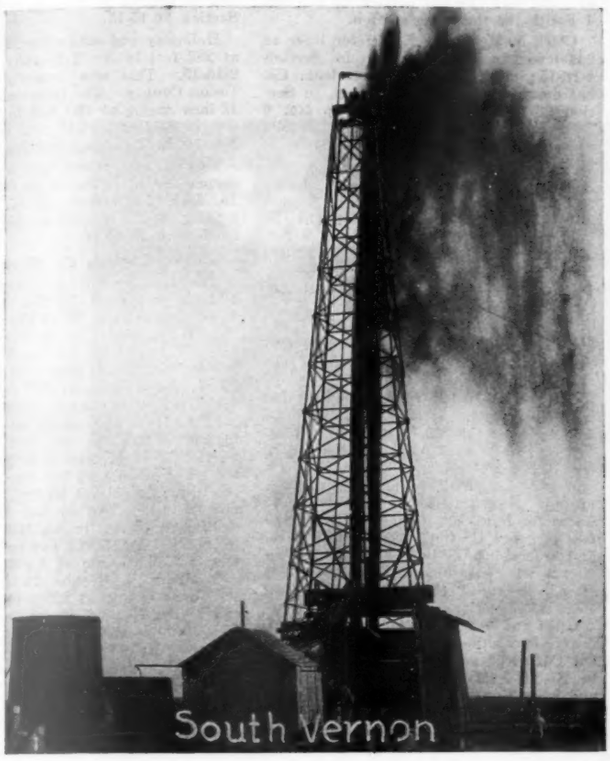
Hickman and others skidded 75 feet southwest of the hole and have derrick up for No. 1 Graves, in Section 3-16-15; they set 10-inch casing at 470 feet in No. 9 Graves, in Section 3-18-15, and in the same section have derrick up for No. 10 Graves.

Hollyfield and others set 6-inch casing at 2,366 feet in No. 8 Giller, in Section 10-16-15; are drilling at 1,075 feet in No. 9 Giller, in Section 10-16-15; the Houston Oil Co. set 12-inch casing at 970 feet in No. 5 Milner, in Section 3-16-15, and is drilling No. 1 Parks, in Section 8-16-16, at 1,900 feet.

The Humble Oil & Refining Co. set 10-inch casing at 513 feet in No. 4 Flenniken, in Section 3-16-15; is drilling at 2,101 feet in No. 5 Pate, in Section 10-16-15; set 6-inch casing at 2,380 feet in No. 6 Pate, in Section 10-16-15, and has derrick up for No. 7 Pate, in the same section.

The Imperial Oil & Gas Producing Co. set 12-inch casing at 453 feet in No. 2 Murphy, in Section 9-16-15; is drilling at 60 feet in No. 3 Murphy, has derricks up for Nos. 4 and 6, and made location for No. 5, all Murphy, in Section 9-16-15.

The Johnson Drilling Co. has drill stem stuck at 980 feet in No. 1 Anderson, in



From South Vernon to Talang Akar

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Wells—Guiberson well at South Vernon, Texas, flowing through 8¼" pipe, with bailer in hole. 88-foot Moore Standard Drilling Derrick, Mid-Continent type.

RIGHT

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MOORE TUBULAR STEEL DERRICKS

MOORE STEEL DERRICKS OUTNUMBER ALL OTHERS COMBINED

Section 1-16-17; Jones & Ganzell are arranging to set 8-inch casing at 2,170 feet in No. 1 Murphy, in Section 38-19-14. The total depth of this well now is 2,290 feet; Keene & Woolf set 10-inch casing at 311 feet in No. 1 J. S. Murphy, in Section 9-16-15, and are now drilling at 1,345 feet.

Kinnebrew and others are rigging up No. 5 Williams, in Section 3-16-15.

The Lion Oil & Refining Co. is drilling No. 2 Bilyew, in Section 8-16-15, at 2,400 feet; tested 3,000 bbls. of salt water at 2,384 feet in No. 5 Flenniken, in Section 10-16-15; rigging up No. 6 Flenniken, in the same section, and No. 7 Graves, in Section 3-16-15; has derrick up for No. 8 Graves, in Section 3-16-15; is drilling plug at 2,333 feet in No. 1 Hays, in Section 4-16-15; has derrick up for No. B-3 Lawton, in Section 10-16-15, and is rigging up No. 3 D. Murphy, in Section 8-16-15.

Magnolia Operations

Lyles and others are rigging up No. 7 Fee, in Section 3-16-15.

The Magnolia Petroleum Co. is arranging to deepen from 1,997 feet its No. 2 Bradford, in Section 8-16-15; is rigging up No. 1 Chandler, in Section 4-19-14; drilling at 2,010 feet in No. 1 Freeman, in Section 7-16-16; drilling deeper with tools at 2,638 feet in No. 3 Harris, in Section 16-16-16; drilling at 2,032 feet in No. 4 Powell, in Section 19-16-15 and has derrick up for No. 2 Stout Lumber Co. in Section 1-16-17.

The Mazda Oil Co. set 10-inch casing at 539 feet in No. D-1 Lawton, in Section 10-16-15; is drilling at 810 feet now, and fishing for liner at 2,049 feet in No. B-1 Lawton, in the same section.

O. G. Murphy is rigging up No. 2 Murphy, in Section 9-16-15; the Natural Gas & Petroleum Co. has derricks up for Nos. 2 and 3 Bilyew, in Section 9-16-15, and made location for No. 4 Bilyew, in the same section; rigged up No. 5 Bilyew, also in Section 9-16-15; drilling in No. 6 Murphy, in Section 8-16-15, at 2,230 feet; arranging to deepen No. A-2 Oran, in Section 5-16-15 from 983 feet, and set 12-inch casing at 97 feet in No. A-3 Oran, in the same section.

The Ohio Oil Co. is bailing casing at 1,954 feet in No. 3 Ballard, in Section 14-16-15; set 10-inch casing at 518 feet in No. 3 S. Murphy, in Section 8-16-15; also set 10-inch casing at 560 feet in No. 4 S. Murphy, in the same section; in Section 10-16-15 is drilling No. 6 Pate at 1,850 feet and has made location for No. 9 Pate.

Page and others are rigging up No. 5 Murphy, in Section 7-16-15, and the Phillips Petroleum Co. is rigging up No. 8 Giller, in Section 10-16-15; is waiting for standard rig with 36 feet of broken sand and 300 feet of oil in the hole at 1,996 feet in No. 9 Giller, in Section 11-16-15, and is waiting for standard rig in No. 10 Giller, the same section, with 31 feet of broken sand in the hole and 400 feet of oil at 1,994 feet.

The Pure Oil Co. set 15-inch casing at 18 feet, 10-inch casing at 512 feet and is drilling at 1,320 feet in No. 1 Bilyew, in Section 8-16-15; is waiting for standard rig with 25 feet of sand in the hole at 2,024 feet in No. 11 Craig, in Section 15-16-15; set 6-inch casing at 2,452 feet in No. 1 Dumas, in Section 16-16-15, and is drilling at 2,454 feet.

Ramage and others are arranging to deepen No. 7 James, in Section 6-16-15, from 2,005 feet; they have derrick up for No. C-4 Lawton, in the same section.

Sam Richardson is rigging up No. 3 Lawton, in Section 10-16-15, and set 2-inch tubing in 12 feet of sand at 2,013 feet in No. 1 M. Murphy, in Section 14-16-15, then set 6-inch casing at 1,965 feet.

Rogers and others are waiting for standard rig with 22 feet of sand in the hole at 2,093 feet in No. 2 LeCroy, in Section 17-16-15.

The Roxana Petroleum Corp. is drilling at 2,088 feet in No. A-1 C. Flenniken, in Section 8-16-15; set 12-inch casing at 29 feet in No. B-2 Flenniken, in Section 5-16-15, and is drilling at 111 feet in No. 1 Hardy-Murphy, in Section 9-16-15.

Rutledge, trustee, is waitng for standard rig with 600 feet of oil in the hole and 2 feet of sand at 2,262 feet in No. 5 Hodges, in Section 6-16-16; the Shreveport Oil Corp. set 10-inch casing at 417 feet in No. 2 Murphy, in Section 9-16-15, and is now drilling at 1,750 feet.

Smitherman-McDonald are drilling at 1,974 feet in No. 1 Hicks, in Section 23-16-16.

Operations of Standard

The Standard Oil Co. of Louisiana set 6-inch casing at 1,925 feet in No. 17 J. H. Alphin, in Section 2-16-15; is drilling at 150 feet in No. 18 J. H. Alphin, in Section 3-16-15; set 10-inch casing at 450 feet in No. 5 M. W. Hardy, in Section 4-16-15, and in No. 6 M. W. Hardy, in the same section, and is rigging up No. 11 McClanahan, in Section 6-16-15.

The Sun Oil Co. is rigging up No. 5 Hatfield, in Section 6-16-15; the Sunny Jim Oil Co. is rigging up No. 4 Flenniken, in Section 9-16-15, and has made location for No. 5 Flenniken, in the same section. The Sure Oil Corp. is rigging up No. 4 Flenniken in Section 5-16-15.

The Texas Co. is rigging up No. 6 Alphin, in Section 3-16-15; tested dry at 1,997 feet No. 3 Galloway, in Section 4-16-15, and is pulling liner to deepen; set 10-inch casing at 459 feet in No. 6 Graves, in Section 3-16-15; also set 10-inch casing at 501 feet, in No. 7 Graves, in the same section, and is now drilling at 912 feet, and is rigging up Nos. 8 and 9 Graves, in Section 3-16-15.

The Unity Petroleum Co. lost 6-inch casing seat and is arranging to set 4-inch casing at 2,363 feet in No. 6 Roper, in Section 3-16-15, and arranging to set 8-inch casing at 2,342 feet in No. 7 Roper, in the same section.

Ward and others are reaming to set 6-inch casing at 2,454 feet in No. 1 Goodwin, in Section 16-16-14; the Webb Oil Corp. is running sand pump in 8 feet of sand at 2,042 feet in No. 1 Adcock, in Section 22-16-15; Nye Wilson set 10-inch casing at 498 feet in No. 5 Hays, in Section 4-16-15; Wright and others are waiting for standard rig with 2 feet of sand in the hole at 2,265 feet in No. 2 Hodges, in Section 1-18-17.

Ouachita County Arkansas

There has been continued activity in the Ouachita area during the past week, there being 83 tests drilling, three locations and derricks up for 26 wells.

The Amerada Petroleum Corp. has derrick up for No. 5 Calloway, in Section 4-16-15; Bray-Hawthorne are drilling in shale at 2,740 feet in No. 1 Elliott, in Section 11-15-17; H. E. Clark set 10-inch casing at 62 feet in No. 3 Hodges, in Section 26-15-17, and is now drilling at 1,221 feet; he has derrick up for No. 4 Smith, in the same section.

Clark & Melat are fishing for liner at 2,290 feet in No. 1 Murphy, in Section 4-16-15; the Cumberland Petroleum Co. has derrick up for No. 1 Elliott, in Section 23-15-17, and is rigging up No. 6 Reynolds, in Section 23-15-17; Dashko and others are rigging up No. 2 Joyce, in Section 34-15-15.

Eberhardt and others set 6-inch casing at 2,251 feet in No. 1 Gibson, in Section 27-15-17; the El Dorado Union Oil Co. is waiting for standard rig with 8 feet of sand in the hole at 2,273 feet and 600 feet of oil in No. 3 LaGrone, in Section 36-15-17, and is rigging up No. 4 LaGrone, in the same section.

Ellis & Dumas set 6-inch casing at 2,206 feet in No. 5 Forest City Box Co., in Section 31-15-16; the Forest Oil Co. is drilling at 1,800 feet in No. 16 Cramer, in Section 22-15-16; running sand pump in 9 feet of sand at 2,296 feet in No. 5 Minor, in Section 29-15-16.

Guy Freely set 6-inch casing at 2,272 feet in No. 2 Gibson, in Section 26-15-17, and is drilling at 2,275 feet; has derrick up for No. 3 Gibson, same section; George & Jones set 10-inch casing at 420 feet in No. 4 Umsted, in Section 4-16-15, and are fishing for liner at 2,016 feet in No. 2 Umsted, same section; they set 10-inch casing at 430 feet in No. 5 Umsted, same section.

Giles and others are rigging up No. 2 Neely, in Section 26-15-16; the Gilliland Oil Co. cored sandy shale at 2,567 feet in No. B-5 Myar, in Section 30-15-16, and is drilling at 2,567 feet; the Gladys-Belle Oil Co. is arranging to deepen No. 1 Neely, in Section 23-15-16, from 2,048 feet; Gray and others set 6-inch casing at 2,195 feet in No. 4 Myar, in Section 32-15-16.

The Gulf Refining Co. set 10-inch casing at 925 feet in No. 3 R. Bennett, in Section 33-15-15; is arranging to deepen No. 1 R. Bennett, in the same section, from 2,016 feet; drilling No. 1 Burkett, in Section 7-15-16, at 2,570 feet; drilling No. 6 B. Goodwin, in Section 32-15-15, at 160 feet; arranging to deepen No. 3 J. Goodwin, in Section 5-16-15, from 2,500 feet; pumping salt water with 10 feet of sand in the hole at 2,317 feet in No. 6 Hardin, in Section 28-15-16, rigging up No. 13 Hardy-Murphy, in Section 4-16-15; set 6-inch casing at 2,236 feet in No. A-12 Werner, in Section 26-15-17, and is rigging up No. A-14 Werner, in Section 36-15-17.

Holloway and others set 12-inch casing at 285 feet in No. 1 Murphy, in Section 2-16-15. This was formerly carried in Union County. The Houston Oil Co. set 12-inch casing at 492 feet in No. 6 Hinton, in Section 5-16-15, and is rigging up No. 10 B. T. Laney, Section 31-15-15.

Howell and others are arranging to deepen No. 2 Williams, in Section 3-16-15, from 1,989 feet; J. K. Hughes is drilling at 2,240 feet in No. 2 Reeves, in Section 28-15-16.

Humble Co. Work

The Humble Oil & Refining Co. set 10-inch casing at 79 feet in No. B-2 Berg, in Section 30-15-15; rigging up No. 6 Flannigan, in the same section, and has derrick up for No. 3 F. Murphy, in Section 3-16-15; drilling No. 3 Umsted, in Section 5-16-15, at 386 feet, and No. 7 Umsted, same section, at 350 feet.

R. L. Hunt and others set 10-inch casing at 60 feet in No. B-6 Halton, in Section 26-15-17, and is drilling at 1,950 feet; has derrick up for No. B-7 Halton, set 10-inch casing at 65 feet, and drilling now at 1,250 feet in No. B-8 Halton; drilling at 45 feet in No. B-9 Halton; all in Section 26-15-17; bailing to test 78 feet of broken sand at 2,407 feet in No. A-2 Myatt, in Section 22-15-17, having set 6-inch casing at 2,280 feet; has derrick up for No. A-5 Myatt, in Section 22-15-17, and is rigging up No. 2 Street, in Section 26-15-17.

The Imperial Oil & Gas Co. set 15-inch casing at 75 feet in No. 5 McClanahan, in Section 6-16-15; the Invaders Oil Co. set 10-inch casing at 58 feet in No. 2 Hardin, in Section 22-15-16; D. N. Johnson is waiting for standard rig with 800 feet of oil and 12 feet of sand in the hole at 2,285 feet in No. 2 Hicks, in Section 27-15-16; W. R. Keever is rigging up No. 1 Neely, in Section 27-15-16.

Kelly and others set 6-inch casing at 2,204 feet in No. 1 Wells, Section 22-15-17, and is blowing 1,500 bbls. of water between 6 and 10-inch casing; Leon and others' 8-inch casing is stuck at 1,900 feet in No. 2 Berg, in Section 4-16-15; they cemented 6-inch casing at 2,333 feet; rigging up No. 3 Berg, and have derrick up for Nos. 4 and 5 Berg, all in Section 4-16-15; they are arranging to deepen No. 1 Umsted, in the same section, from 2,020 feet.

The Louisiana Oil Refining Corp. set 10-inch casing at 106 feet in No. 1 Myatt, in Section 22-15-17, and are rigging up No. 2 Myatt, in the same section.

Langston and others have made location for No. 1 Alley, in Section 25-14-19; the Magnolia Petroleum Co. is drilling in at 2,278 feet No. 2 Bettie Clawson, in Section 35-15-17; the Marine Oil Co. is fishing for bit at 2,010 feet in No. 4 Hays, Section 4-16-15; set 10-inch casing at 313 feet in No. 5 Hays, same section, and 10-inch casing at 374 feet in No. 5 Umsted, Section 5-16-15.

McCorkle and others set 6-inch casing at 1,897 feet in No. A-2 Smith, in Section 25-15-17, and have derrick up for No. B-2 Smith, same section; J. H. Meek, receiver, set 10-inch casing at 502 feet in No. 9 McKenzie, in Section 36-15-16; Murdock and others set 6-inch casing at 2,251 feet in No. 1 Riley, in Section 22-15-17.

The Penguin Oil Co. set 10-inch casing at 52 feet in No. 3 Hardin, in Section 27-15-16; the Pure Oil Co. is rigging up No. 2 Cunningham, in Section 30-15-15; J. D. Reynolds set 10-inch casing at 42 feet in No. 1 Berg, in Section 27-15-17, and is drilling at 2,741 feet in No. 6 Ward, Section 25-15-17; set 10-inch casing at 261 feet in No. 1 Berg, in Section 13-15-17.

Roxana Operations

The Roxana Petroleum Corp. is arranging to deepen No. 2 Umsted, Section 4-16-15, from 2,022 feet; the Shreveport Oil Corp. set 10-inch casing at 480 feet in No. 2 Umsted, Section 4-16-15; the Simms Oil Co. is drilling at 1,604 feet in No. E-4 Berg, Section 30-15-15; J. S. Smith plugged back 2 feet, and is waiting

(Continued on Page 146)

East Central Texas

By Staff Correspondent

MEXIA, Tex., March 21.—Two completions in the Wortham Field this week demonstrated that the field had a kick or two left in it. The Humble Oil & Refining Co.'s No. 4-D Crouch made 2,456 bbls. the first 24 hours from sand at 2,971-3,029 feet and the same company's No. 11 Ella Dodd, started off at 1,800 bbls. from sand at 2,985-3,025 feet. The other completions of the week were comparatively small producers with the exception of The Texas Co.'s No. 4 Watson, which came in at 700 bbls. from sand at 2,970-90 feet and an 800-bbl. well of the Humphreys Boyd Oil Co. Other completions in the field were as follows:

The Rio Bravo Oil Co.'s No. 9 H. & T. C. right of way, sand at 2,970-88 feet, 100 bbls

E. L. Smith's No. 2-A Beall, sand at 2,974-90 feet, 150 bbls.

Boyd Oil Co.'s No. 5 Boyd, sand at 3,015-18 feet, 100 bbls; No. 9 Boyd, sand at 3,011-16 feet, 140 bbls.; No. 16 Boyd, sand at 3,010-18 feet, 150 bbls; No. 9 Ferguson, sand at 2,982-3,017 feet, 90 bbls.; No. 13 Ferguson, sand at 2,995-3,015 feet, 90 bbls.; No. 15 Ferguson, sand at 2,990-3,015 feet, 70 bbls.; No. 7-A W. D. Wilson, sand at 3,007-26 feet, 70 bbls.; No. 3-B Wilson, sand at 3,000-17 feet, 50 bbls.

The Republic Production Co.'s No. 5 Allmond, sand at 2,960-88 feet, 100 bbls.

Rio Bravo Oil Co.'s No. 4 H. & T. C. Right of Way, dry and abandoned at 3,895 feet.

Humble Oil & Refining Co.'s No. 2 T. B. Poindexter, dry and abandoned at 3,017 feet.

E. L. Smith's No. 2 A. A. Edwards, sand at 3,025-26 feet, 35 bbls. of oil and 300 bbls. of salt water a day.

The Texas Co.'s No. 5 Chancellor was dry at 3,104 feet.

The Magnolia Petroleum Co.'s No. 14 N. B. Boyd, sand at 3,120-23 feet, 3,000,000 feet of gas and 50 bbls. of salt water a day.

The Boyd Oil Co.'s No. 12 N. B. Boyd, sand at 3,004-1 feet, 800 bbls.

Gardner and others' No. 1 Speight, a wildcat in Limestone County, was dry and abandoned at 3,695 feet.

The Mexia Giant Oil Co.'s No. 1 Cook, Varela survey, a wildcat in Limestone County, was dry and abondaned at 3,670 feet. It had been shut down a long time.

In Navarro County Ashley Brothers abandoned their test on the Pillin farm, Gidding survey, at 1,535 feet.

In the Powell Field, Navarro County, the McMan Oil Co. abandoned its deep test on the Chapman farm at 4,753 feet. It was a hole full of salt water.

The Humble Oil & Refining Co.'s No. 16-C Irvine, Taylor survey, made a 20-bbl. well at 1,526 feet, total depth 1,647 feet, and the same company's No. 10 R. I. Kent started at 25 bbls. from sand at 1,585-1,650 feet. The Pure Oil Co.'s No. 12 R. I. Kent started at 20 bbls. from sand at 1,583-1,648 feet.

(Continued on Page 144)

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By D. S. Wakenight

Most important completion of week Carter Oil Co.'s well in Trenton Rock development, Licking Township, Licking County, Ohio, swabbing 100 bbls. in three days. Sun Oil Co. gets 35-bbl. producer in York Township, Morgan County. Rawe Brothers' No. 3, Greene County, West Virginia, 45 bbls.

PITTSBURGH, Pa., March 23.—Light wells were the rule in all districts of the Eastern fields during the past week and consisted of routine operations in the old fields. The most important well completed was the Carter Oil Co.'s test on the G. E. Tish farm, in the Trenton Rock development in Licking Township, Licking County, Ohio. During the early part of the week it was drilled into the Trenton Rock pay and showed for a light pumper. Later they gave it a shot and they swabbed 100 bbls. the ensuing three days. The location is 600 feet east of the Pure Oil Co.'s Trenton Rock producer on the Ilean Smith farm. At this time there is no other wells drilling to the Trenton Rock in this district.

In Enoch Township, Noble County, Albert P. Sheets & Co. have a very light pumper in the Buell Run sand at No. 3 on the Thomas Hupp farm. In Section 2, Wayne Township, Monroe County, W. B. Anderson & Co. have a very small pumper in the Keener sand at a test on the Y. A. Bates farm. In Section 28, Rush Creek Township, Fairfield County, the Rush Creek Oil & Gas Co. has started to drill a second test on the Robert Hyde farm.

Shallow Sand Producer

In Section 33, York Township, Morgan County, the Sun Oil Co.'s No. 7 on the C. E. Switzer farm is good for 35 bbls. a day in the Berea grit.

In Section 10, Grandview Township, Washington County, Herman Hill & Co. have drilled a test on the Jordon Amos farm into the salt sand. It is a gasser. In Section 20, Liberty Township, Erbs & Payne completed in the second Cow Run sand No. 3 on the Harvey Scott farm good for 5 bbls. a day. In the same township, Heldman and others are drilling a test on the T. E. Williams farm. In Wesley Township, Earl Stephens & Co. have a duster on the John Reynolds farm. In Newport Township, Otto Becker & Co. are drilling a test on the Roy Hill farm. In Adams Township, L. L. Banks & Co. have started to drill a test on the Louisia Gerber farm.

In Section 2, Franklin Township, Licking County, Moore & Adams completed No. 9 on the T. L. Stevens farm good for 5 or 6 bbls. in the Berea grit. In Section 20, Lawrence Township, Washington County, the Peoples Banking & Trust Co. drilled No. 11 on the J. D. Lehmer farm from the second Cow Run sand to the Big Injun sand good for 10 bbls. The well also has a good gas pressure.

Gassers in Holmes County

The Central Ohio Gas Co. completed in the Clinton sand No. 3 on the Oscar Korns farm, in Lot 3, Monroe Township, Holmes County, good for 500,000 feet. In Lot 5, same township the same company completed No. 3 on the U. S. Davenport farm. It is also a Clinton sand gasser good for 1,500,000 feet. In Section 21, Madison Township, Licking County, the Atha Oil Co. has started to drill No. 7 gasser on the Melick Brothers' farm to the Clinton sand.

In Lot 3, Monroe Township, Holmes County, Ohio, the Central Ohio Gas Co. drilled a test on the T. T. Finney farm through the Clinton sand. It is a gasser good for one-third of a million feet. The location is 1,500 feet south of the company's test on the D. S. Finney farm. Holmes County has recently been furnishing more gas wells than oil producers. In Section 13, the East Ohio Gas Co. is due in the Clinton sand at No. 5 on the T. P. Connor farm. In Section 4, same township, this company is due in the same formation at a test on the B. C. Bird farm.

In the northwest quarter of Section 23, Reading Township, Perry County, Reagan & Co. drilled their No. 3 on the St. Joseph Literary Society property through the Clinton sand. They found 45 feet of sand but no oil or gas. The total depth of the well is 3,175 feet and the location is 100 feet west of a Berea grit gasser on the same farm. In Lot 22, Franklin Township, Licking County, Ralph Brothers' No. 8 on the Gideon S. Smith farm is good for 4 bbls. a day in the Berea grit.

Starting New Work

In Newton Township, Licking County, F. M. Rugg & Co. are drilling another test on the Jacob Weiss farm. In the same township, E. J. Edmons & Co. have started to drill No. 4 on the Robert Stair farm. In Section 25, Harrison Township, Knox County, A. J. Weidman and others started to drill a test on the John C. Hurdy farm. In Section 26, Rush Creek Township, Fairfield County, the Carter Oil Co. is drilling a test on the John McCandlish farm. In Section 22, Richland Township, the Pure Oil Co. is due in the sand on the Frank Miller farm.

West Virginia

On Broad Run, McClelland district, Doddridge County, West Virginia, the Carter Oil Co.'s test on the Thornton Weekley farm is a small gasser in the Gordon sand at a total depth of 2,950 feet. On the same stream and in the same district, the Hope Natural Gas Co.'s test on the Ephriam McCoy farm is a gasser in the Gordon sand at a depth of 2,850 feet.

On Worthington Creek, one-half mile below Boreman pumping station, Union district, Wood County, Park Bowser has drilled his test on the Johnson heirs' farm through the Berea grit and dry. On Laurel Creek, same district, the New York Petroleum Co. started to drill on the Benjamin Putman farm. This is located in advance of production. In Lee district, Calhoun County, the Hope Construction & Refining Co.'s second test on the Albert Bell farm is a light gasser in the Berea grit. In Curry district, Putnam County, the Commercial Gas Co. has a gasser in the Berea grit at a test on the J. Bays farm. In the same district, the Star Gas Co. is due in the Berea grit at a second test on the H. C. Osborne farm.

In Clay district, Monongalia County, the South Penn Oil Co. drilled its old No. 3 on the Malinda Tennent farm down to the Bayard sand. In the lower formation a gas pressure good for 500,000 feet was developed. In McClelland district, Doddridge County, 1½ miles east of Big Flint station, Carter Oil Co. completed in the Big Injun sand its test on the I. E. Smith farm good for 5 bbls. a day.

Temperature of Deep Test

Near Terra Alta, Portland district, Preston County, the Hope Natural Gas Co. has reached a depth of 4,043 feet at its deep test on the Joseph Gordon farm. They have been taking the temperature of the well at every 1,000 feet as drilling progressed. At the surface, when they started to drill it showed 52 degrees, Fahrenheit. At 1,000 feet, 65, at 2,000, 79, at 3,000, 96, at 3,500, 103 and at 4,000, 116. This is 8 degrees higher than any other deep well ever drilled by this company at the same depth. They are now drilling at 4,043 feet and as drilling progresses will take temperature at every 500 feet. Dr. I. C. White, State geologist and C. E. Van Ostrand, of the geological survey, are very much interested in this deep test to add to their geological information as compared with other deep wells.

Dry and Abandoned

In Proctor district, Wetzel County, the Hope Natural Gas Co. after drilling to a total depth of 3,492 feet abandoned its test on the Hiram Lemasters farm. It was dry in all sands. In Church district, the Manufacturers Light & Heat Co.'s test on the R. A. Hixenbaugh farm is a gasser in the Gordon sand. In Washington district, Marshall County, the Myers Gas Co.'s test on the C. W. Ramsey farm is dry and abandoned at 3,085 feet. In Liberty district, the Decem Development Co. has drilled deeper its second test on the W. A. Evans farm and at a depth of 3,303 feet struck a flow of gas. In the same district, the Manufacturers Light & Heat Co. has a gasser in the Big Injun sand at No. 11 on the Marshall County Bank property. The Hope Natural Gas Co.'s test on the W. G. Bennett farm in DeKalb district, Gilmer County, is a gasser in the Big Injun sand. In the same district, the same company has a gasser in the same formation on the F. M. Beall farm. In Center district, the same company's test on the Hannah Stump farm is a gasser in the Maxon sand.

On Gillespie Run, Grant district, Ritchie County, T. A. & E. P. Mellon have completed and shot in the Berea grit a second test on the Conaway-Patton farm good for 4 bbls. a day. On Charleys Creek, Grant district, Cabell County, 5 miles east of Beckett station, the Ohio Fuel Oil Co. completed and shot in the Berea grit a test on the C. A. Hardin farm. It is a fair gasser. In the same district, on Two-Mile Creek, the H. C. Zogg Oil & Gas Co.'s second test on the J. H. Harshbarger farm is completed and shot in the same formation and good for 200,000 feet.

The Columbia Carbon Co.'s No. 4 on the C. W. Vickers farm, on Little Sandy River, Elk district, Kanawha County, is a gasser in the Big Injun sand good for 1,600,000 feet a day. The location is 900 feet south of the first test on this farm. On the same stream and in the same district, the Oakland Development Co. has started to drill a test on the M. C. Higginbotham farm. In Smithfield district, Roane County, the United Fuel Gas Co. has started to drill on the P. R. Simmons farm.

Gassers in Kanawha County

On the waters of Big Sandy Creek, Big Sandy district, Kanawha County, the United Fuel Gas Co. has completed in the Big Injun sand a test on the D. M. Rollins farm. It is a gasser good for 600,000 feet. On the same stream and in the same district, the company has a gasser in the same formation at a test on the Hurlings-Cobb farm, good for 880,000 feet. The same company has the rig completed for a test on the R. W. Kennedy farm. On Sycamore Creek, Sherman district, Calhoun County, the Hope Construction & Refining Co. has a very light show of oil in the Maxon sand at a test on the E. F. Deweese farm. In Grant district, Wetzel County, the Hope Natural Gas Co.'s test on the John Ingram farm is a gasser in the Gordon sand. The well is also spraying a little oil. In Greene district, Rawe Brothers' No. 3 on the L. W. Morgan farm produced 45 bbls. the first two days after completed in the Big Injun sand.

In Washington district, Calhoun County, the Hope Natural Gas Co. has a duster at a test on the Farrar-Knotts farm. It has been abandoned. In Center district, Gilmer County, the Hope Construction & Refining Co. has a gasser in the Big Injun sand on the Bennett farm. In the same district, the McCall Oil & Gas Co.'s test on the E. W. McClain farm is a gasser in the Maxon sand. In Grant district, Ritchie County, the Warrior Petroleum Co. has a gasser in the same formation at a test on the K. R. Phillips farm. In the same district, Mellon Brothers have a gasser in the Big Injun sand at a second test on the W. E. Conaway farm. In Murphy district, Ritchie County, the Parks Oil Co. has a duster at a test on the Amos Scott farm. In Union district, Wood County, the New York Petroleum Co.'s test on the John Copelin farm is dry and abandoned.

Good Pumper in Doddridge

In Central district, Diddridge County, the Carter Oil Co.'s test on the W. H. Hufford farm is good for 20 bbls. a day in the Big Injun sand. In Cove district, the Pittsburgh & West Virginia Gas Co.'s test on the William Flesher farm in through the Big Injun sand and is dry and abandoned. In McClelland district, the Hope Natural Gas Co.'s test on the Ephriam Morgan farm is dry and abandoned. In the same district, the Carter Oil Co.'s test on the Thornton-Weekley farm is a gasser, spraying a little oil. In the same district, the same company's No. 3 on the I. N. Smith farm is a gasser in the Gordon sand. In Simpson district, Harrison County, the Eight-Four Oil & Gas Co. has a gasser in the Gordon sand on the Warner farm.

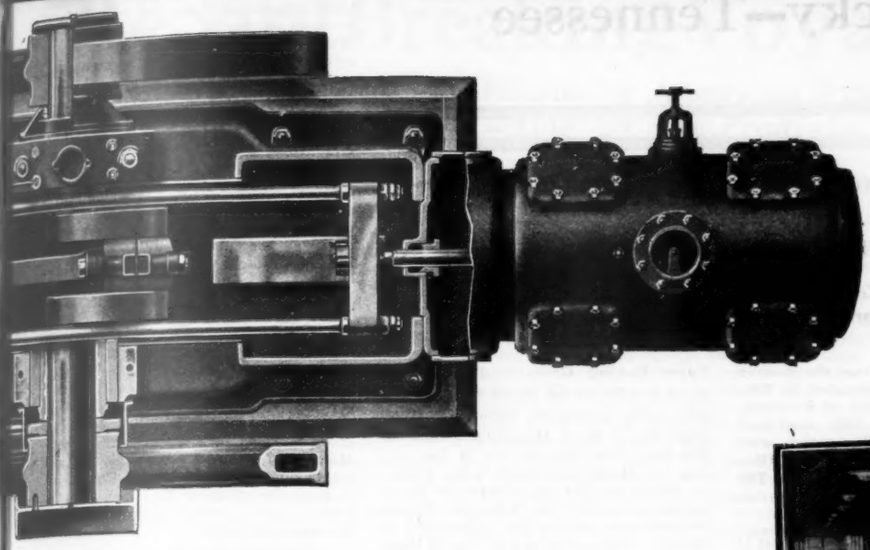
Tests Starting and Drilling

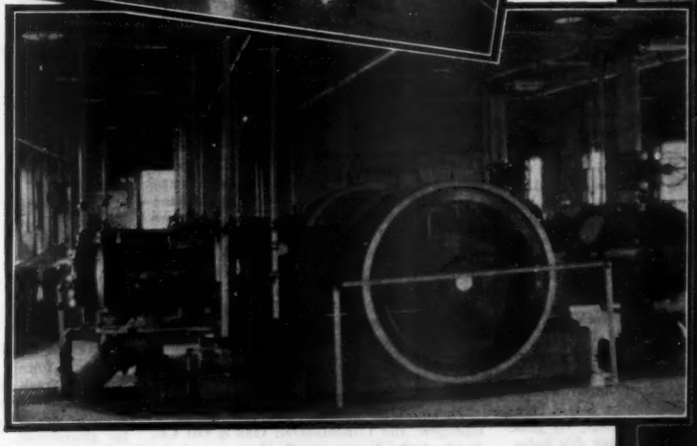
In Murphy district, Ritchie County, the Parks Oil & Gas Co. is due in the Maxon sand at a test on the Amos Scott farm. John Leeton & Co. are due in the Cow Run sand on the John Copelin farm, in Walker district, Wood County. In Union district, Pleasants County, L. C. White & Co. is building a rig on the E. L. Newland farm. The Hope Construction & Refining Co. is drilling in the Maxon sand on the Rebecca Hays farm, in Burning Springs district, Wirt County. In Central district, Diddridge County, the Hope Natural Gas Co. has shut down for orders at 2,190 feet on the Mark Smith farm. In West Union district, the Murphy Oil Co. is building a rig on the William Rollins farm.

Lewis County

In Collins Settlement district, C. F. Moran & Co. is hauling rig timbers to a location on the T. R. Snider farm. In Lee district, Calhoun County, the Hope Construction & Refining Co. has the road completed to a location on the W. H. Schoolcraft farm. In Sherman district, the Hope Construction & Refining Co. has rig material at a location on the E. F. Deweese farm. In DeKalb district, Gilmer County, S. G. Roberts & Co. have rigged up on the Albert Beall farm. In Sheridan district, Calhoun County, the Chemical Oil Co. has a rig up on the Bennett-Sanders farm. In Greenbrier district, Doddridge County, R. S. Monroe is rigging up on the Edith Ferris farm. In Ten-Mile district, Harrison County, the Delva Tex Oil Co. has started to drill on the Mona B. Lanhan farm. In the same district, the Carson Gas Co. has rig material at a location on the J. W. Harbert farm. The Superior Gas Co. has spudded in on the Viola Adkins farm, in Union district, Lincoln County. In McElroy district, Tyler County, the Hope Construction & Refining Co. started to drill on the Han-

(Continued on Page 142)





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PRESSORS

Kentucky—Tennessee

By Vern T. Whitney

Consolidated Gas & Oil Co.'s gasser in Hall Baker Pool, Barren County, north of Glasgow gas field, may lead to new oil territory. Same company has 20-bbl. producer. Short Fork Development Co. gets 20-bbl. completion in South Weir Field. Development work in Allen and Warren Counties lagging.

BOWLING GREEN, Ky., March 23.—The most interesting completion of the past week in the Western Kentucky Field is the big gasser of the Consolidated Gas & Oil Co., on the Floyd Turner farm, north of the Hall Baker Pool, in Barren County. This well, estimated at 1,000,000 feet of gas, in the first pay at 70 feet below the shale, caught fire, lighting up the country for many miles around. The driller and tool dresser were both burned and the rig was damaged considerably before it was skidded out of danger.

This Turner well is a little north of the present gas district at Glasgow and many believe that further exploration in that direction may result in the finding of new oil territory. The Hall Baker Pool, brought in several months ago, is showing some very good wells which are holding up remarkably well from the deep pay at approximately 180 feet below the shale. Leasing has been very active in all sections of Barren County and as several deep tests are being started much interest will be shown in this section of the State for some time to come.

It is understood the Superior Oil Corp. has a standard rig up in Scott County, Tennessee, near the hamlet of Winfield, where it will drill a 2,500-foot test to the Trenton. The area between this test and the new development at Tinsley's Bottom in Clay and Jackson Counties will probably get some tests during the present year. A considerable number of years ago some very good wells were drilled in the area but the short-sighted policy of the State of Tennessee at that time in levying an excessive tax on the pipe line companies, resulted in the taking up of the existing lines, and the practical shutting down of the fields. Now, however, a different condition exists, and the State will do all possible to further exploration for oil and gas, the present laws being far more lenient than those of Kentucky.

It is believed the possibilities of the lower sands, from the Irvine to the Lower Trenton, have been overlooked in Kentucky and Tennessee, although some fine production from the lower horizons has been brought in throughout Cumberland, Monroe and Wayne Counties, Kentucky, and in Scott County, Tennessee.

Week's Work

A brief of the week's work in the whole of Kentucky shows 25 completions, 7 failures, 2 abandoned wells, 3 gassers and 13 producing wells with a combined initial yield of 118 bbls. Compared with the previous week this shows 4 less completions, 6 less producing wells, 68 bbls. decrease in production, 2 fewer dry holes, 2 additional gassers and 2 more abandoned holes. The completions were distributed as follows:

County—	Comp.	Prod. Wells	Prod.	Dry	Gas
Barren	9	5	49	1	1
Lee-Owsley	3	2	4	0	1
Lawrence-Johnson	2	2	27	0	0
Johnson-Magoffin	2	2	21	0	0
Elliott	2	1	2	1	0
Warren	2	1	15	1	0
Allen	2	0	0	2	0
Cumberland-Monroe	1	0	0	1	0
Boyd	1	0	0	0	1
Wayne	1	0	0	1	0
Total	25	13	118	7	3
Last week	29	19	186	9	1
Difference	4	6	68	2	2

Runs and shipments from the western division of Kentucky amounted to 108,569.43 bbls. for the month of February, an increase of 102.08 bbls. compared with January runs. All counties, with the exception of Warren, Hopkins, Ohio and Hancock, showed slight gains. The runs were distributed by counties as follows:

County—	Feb. Runs	Increase	Decrease
Warren	44,305.29	.....	3,815.18
Allen	28,396.61	1,120.34	.....
Barren	12,285.68	1,315.42	.....
Owensboro dist.	10,941.39	.....	211.47
Cumberland-Monroe	9,002.43	333.37	.....
Simpson	1,504.78	559.07	.....
Clinton	1,383.25	800.53	.....
Hopkins (app.)	750.00	.....	.....
Feb. runs	108,569.43	4,128.73	4,026.65
Jan. runs	108,467.35		
Difference	102.08		

The Cumberland Pipe Line Corp.'s runs from the eastern division for the month of February showed an increase of 6,989.26 bbls. with a total run of 300,357.92 bbls. compared with runs amounting to 293,368.66 bbls. during January. Of course these runs would be increased in the neighborhood of 100,000 bbls. if all reports from the east side of the State were available. The Cumberland Pipe Line is connected to approximately 6,000 wells while other purchasing agencies have close to 3,000 wells on their lines.

Barren County

For the fifteenth consecutive week Barren County has led all other Kentucky counties in completions. This week nine were reported, 5 of them oil producers, 1 gasser, 1 dry hole and 2 abandoned tests. At present there are between 35 and 40 rigs running, which is at least 5 more than any other county is credited with. Wells in Barren come in small, from 3 to 50 bbls., but hold their production well, which is the reason that it holds the lead in the State in activity.

A big production deal was made last week, one of the first of the year, when Mercer, Pa., parties purchased the properties of the Akers Oil Co. to the west of Glasgow. It is the W. S. Smith lease of 234 acres, with 14 producing wells; 250 acres of undeveloped territory went with the deal.

In the Emery-Moore Pool, west of Glasgow, the Carter Oil Co. finished two wells; No. 5 Gooden pumped 4 bbls. at 556 feet and No. 4 Jess Wininger tested 5 bbls. at 520 feet. The Starr Oil Co.'s No. 15 Ritchie started off at 12 bbls. from 556 feet. At Oil City, Nelson and others abandoned No. 2 Dossey at 16 feet below the shale.

In the Hall Baker Pool, just north of Glasgow, the Consolidated Gas & Oil Co. finished the banner well of the week in its No. 6 on the Hall Baker tract, good for 20 bbls. at 180 feet below the black shale; the Wood Oil Co.'s No. 5 Will Church, adjoining the Baker, tested 8 bbls. at 552 feet; Harrington & Norris' No. 3 on the Evans was abandoned on account of a crooked hole and the rig was moved to a new location on the same farm.

No. 3 on the Ritter Brothers' farm, 9 miles south of Glasgow, was finished dry and the lease abandoned.

Drilling Activities

Emery-Moore Pool: The Star Oil Co. started No. 1 Richardson north of the Upper Bowling Green road; if a producer it will extend production one-half mile to the southwest; Gillespie & Wiggings' No. 2 Mack Mansfield, drilling at 150 feet; Fred Moore's No. 9 Fee, rigging up; Henderson Oil Co.'s No. 6 Burris, drilling at 210 feet; Carter Oil Co. is rigging up to drill No. 6 Gooden, Ziegler Brothers are drilling No. 5 Drennan at 200 feet; Moore and others' No. 2 Hans Gassaway, shut down; Shriver & Co.'s No. 1 Burton heirs, shut down on top of the sand; Kopel Oil Co.'s No. 7 Childress, drilling at 231 feet; Roedener's No. 1 Ovhs, drilling at 57 feet; Stafford & Roedener's No. 3 Price, cleaning out after shot; Star Oil Co.'s No. 16 Ritchie, drilling at 420 feet; No. 6 Free is a location.

Hall Baker Pool: Consolidated Gas Co.'s Nos. 7, 8 and 9 Hall Baker, drilling at 520, 239 and 242 feet, respectively; Wood Oil Co.'s No. 4 John Church, drilling at 200 feet; same company's No. 1 Duff, drilling at 180 feet. T. J. Samson's No. 1 Preston, drilling below the shale; Reese and others' No. 2 Dodder, on top of the pay sand; Fred William's No. 1 Franklin, drilling at 202 feet; Esslinger Oil Co.'s No. 1 Jones, near Coral Hill, rigging up; Sansom's No. 2 Ben Myers is being cleaned out; same parties No. 1 Dean has no showing at 550 feet; Harrington & Norris, spudding No. 4 Evans.

Gorby Pool: Big Jack Oil Co.'s No. 2 Hatfield, drilling below the shale; Porter and others' No. 3 McLaughlin, drilling in the black shale at 180 feet. A small well was had in the stray sand at about 136 feet which was passed up. T. L. Gorby's No. 1 Chamberlin is spudding in; No. 1 Everett, drilling at 280 feet; No. 1 Bybee is a rig; Lewis J. Emery, Jr., & Sons' No. 5 Depp & Greer, drilling at 225 feet; No. 2 John Wells, drilling below the shale; Citizens Oil Co.'s No. 1 Judge Bybee, at Haywood, drilling at 240 feet; Hammerlie and associates' have started a deep test on the John A. Dodd farm between the Emery-Moore and Gorby Pools. This test will create much interest. L. J. Emery, Jr., & Sons are starting No. 1 on the Cox farm, 2 miles below Glasgow Junction, in virgin territory.

Warren and Allen Counties

Development work in Warren and Allen Counties is lagging to a great extent and no increase in operations is looked for, for some time at least. Wells now drilling are in proven areas as no one has attempted to drill any out of the way tests.

In Warren County, George McGinley's No. 4 on the Wilson place in the Davenport Pool is pumping 15 bbls. after being shot at 1,192 feet, approximately 95 feet

(Continued on Page 118)

Fields of the Central West

By Whit

FINDLAY, Ohio, March 23.—Development work in the Central West fields comprising central and northwestern Ohio, Indiana and Illinois slowed up considerably and no resumption of work is expected for from 30 to 60 days at least or until weather conditions change. The past week saw heavy rains and a snow storm making roads to the field impassable.

The old Lima Field of northwestern Ohio showed the worst slump in completed work of any week during the entire winter. Operators are anxious to keep the drilling tools at work, but are unable to move them from one location to another over the soft ground and many days of hot sunshine will be required to put the surface in a movable condition. Only three completions were reported from the Lima Field, two of which were dusters and one producer with a flush of 76 bbls.

In Madison Township, Sandusky County, Lewis Donnells and Son drilled a test 600 feet from the south line and 1,360 feet from the west line of the Lewis Donnells' farm in the northwest quarter of Section 27. Top of the Trenton was found at 1,200 feet and at 15 feet in fresh water was found, which means there is no chance for an oil well, even at deeper drilling and the hole will be abandoned. This test shows conclusively that some well in former days failed to plug properly and the fresh water has got into the sand and will spoil development work no doubt over a large area.

Quite a surprise was met with in Cass Township, Hancock County, when the Ohio Oil Co. drilled in its No. 19, 625 feet from the north line and 250 feet from the east line of the James E. Hudson No. 2 farm in the southeast quarter of Section 15. This well was drilled deep enough in the Trenton to find commercial production, if any was to be found, but there was not even a showing after given a shot of 260 quarts of nitro glycerin. This farm has been a wonderful producer, nearly every well in past years proving a large one and the fact that the new well failed to show a rainbow is a mystery to all. This development is along the one-time famous gas belt, known as the Sucker-Rod or Hogs Back anticline, where wonderful oil and gas wells were found, extending from east of Findlay across the eastern portion of Hancock County, running a little west of north passing through Wood County, thence into Lucas County and lost track of near Montclove, in Lucas County.

The newest gas field in the western portion of northwestern Ohio, known as the Coldwater Field, in Butler and adjoining townships of Mercer County, looked as though a promising gas area was to be developed, wells coming in for from 2,000,000 to 4,000,000 feet, from the Niagara Lime at a depth of approximately 600 feet. When the area was visited a few days ago it was discovered that several of these wells could only furnish about 500,000 feet to the lines serving St. Marys, Lima, Celina and other nearby points. There are possibilities of a line from the Payne Field, in Paulding County, to connect with the gas lines furnishing these towns.

Paulding County

The last completion in the Payne Field, in Paulding County, brings more prominence to that field in the fact that it found a second pay that is more prolific than the first pay found in the Trenton limestone. John T. Schenck's second test, 900 feet from the north line and 250 feet from the west line of the C. C. Springer farm, at the west edge of the town of Payne and in the northwest quarter of the southeast quarter Section 34, Harrison Township, found a second pay at a depth of 43 feet in the sand, the first pay being found at 14 feet in, the top of the Trenton being struck at 1,402 feet. After a shot of 40 quarts in the first pay and 80 in the second it showed a production of 76 bbls. the first 24

(Continued on Page 116)

Record Breaking Voyages Through Air

Famous Flights by American Aviators and Aeronauts Made Possible by the Products of the Oil Industry

By Charles E. Kern

WASHINGTON, D. C., March 23.—Record breaking voyages in the air have recently been made. every one of which places a demand upon the American oil industry and it is accepted as a matter of course that these demands will be met promptly and fully. Gasoline of the best quality, lubricating oil of the most dependable that can be obtained and helium are the three essential elements that must go hand in hand with the development of aviation over the broad expanse of North America and throughout the world.

The round the world flight made by the United States Army air service, the 5,000-mile voyage of the German built Z-R3 (now the Los Angeles) in its journey from Fredericksbaven to Lakehurst, N. J., and the 10,000-mile trip from ocean to ocean and almost around the United States are great achievements that have made a place in history that will be recounted whenever the story relating to the navigation of the air is told to future generations. As momentous as are these achievements they are but the beginning of a new science and a new activity that probably will provide more thrills than any other single class of inventions the world has known. Efficient and adequate motive power and lubrication are essential in the development of this new science and helium, the product of natural gas, is the only inflating material that can make safe the lighter-than-air airship.

Dawn to Dusk Flight

At daybreak June 23, Lieutenant Maughan of the Army air service left New York in his airplane and headed westward like a meteor through the sky. the miles by the hundred holled behind him and at dark he rested the wheels of his airplane at San Francisco, Cal., having spanned the North American continent in a single day between dawn and dusk.

Pennzoil was used in lubricating the T-2 when on May 3, 1923, it was driven by Lieutenants Oakley Kelly and John Macready 2,600 miles across the continent without a stop from New York to San Diego. For 26 hours, 49 minutes and 4⅘ seconds, the high speed Liberty motor ran continually, practically wide open all the way. The weight of this plane with its huge cargo of fuel weighed over five tons and it was the largest weight ever lifted in an aeroplane driven by a single motor. Pennzoil was submitted to the laboratory at Dayton and was chosen after the most careful tests. This was considered one of the hardest tests any lubricating oil has ever received and it is interesting to note that after the completion of the non-stop flight the plane was flown back to Washington and not even a spark plug had been removed for cleaning. Samples taken from the crank case after the trip and tests in the laboratory showed that the oil retained good color and lubricating value.

Pennzoil had been used when Lieutenants Kelly and Macready set a world's endurance record at McCook Field, April 16, 1923. The plane remained in the air 36 hours, 5 minutes and 30 seconds. This was a real test and Pennzoil showed remarkably little consumption per flying hour.

Pennzoil was also used on the first one stop trip across the continent, made by Lieutenant James Doolittle, September 5, 1922, when he flew from Jacksonville, Fla., to San Diego, Cal., with one-half hour stop at San Antonio, Tex. This was one of the most spectacular flights ever made, inasmuch as the flight was started at 10 o'clock at night and almost immediately Lieutenant Doolittle ran into a violent thunder and lightning storm. He found himself driving at 100 miles an hour speed through darting flashes of lightning, blinding rain and inky darkness over a territory which did not have a possible landing place within 100 miles in any direction. It meant certain death if his motor failed.

These history making airplane flights are a part of the traditional peace time policy of the American Army which has ever been the pioneer in developing better means of communication. These flights are only indices of what the future has in store for civilization.

Round the World

The round the world Army airplane flight fresh in the mind of everyone, it is believed will have a far reaching effect upon the peace of the world. The three airplanes, the Chicago, the Boston and New Orleans made this trip, arriving safely back in the United States, having gone up along the Pacific Coast of North America, across to Asia, through Europe to England, Iceland, Greenland, Labrador, thence southward and across the United States, making the stretch complete without a serious mishap. Indeed, the strange part of all of these daring voyages in the air was the fact that life was not lost in the hazardous undertakings. An American oil company supplied the necessary gasoline and lubrication, these supplies having been provided at every point where the airship landed throughout their world journey. The gasoline was purchased under the tests provided by United States Government specifications and was of the same quality that is available to other similar enterprises so long as Americans continue their efficient conduct of the oil industry.

The route of the round the world aviators traversed or touched 21 foreign countries and 25 States and one territory of the Union. A total of 57 hops were made, with an average of 483 miles to each jump. The total flight was 27,000 miles.

With each air cruiser consuming 20 gallons of gasoline in an hour of flying, the three planes used, in approximatey 351 flying hours, 21,060 gallons. Each plane used about 30 gallons of oil every 2,400 miles.

The ZR-3 in its trip across the Atlantic, traveled a distance of, 5,066 miles without mishap in 81 hours and 17 minutes or three days, nine hours and 17 minutes. As aerial trans-Atlantic transportation stands now, in comparison with ocean craft, it reduces the time two and one-half days or more.

With the normal fuel supply of 21.2 decimal tons of gasoline and 2.4 tons of oil, the ship's radius of action follows: With five motors, full speed, 46 hours, 3,500 miles; with cruising speed, 78 hours, 5,280 miles. The ZR-3 on its trip over consumed 24½ tons of oil and gasoline, carried 32 passengers and 95,000 pounds of freight, including fuel.

No Equal Lubricant

One of the interesting facts in respect to the operation of airplanes is that no lubricant has been devised superior to the American lubricating oil. It will be remembered that during the World War castor oil was for a time looked upon as of superior quality as a lubricant for airplanes. Some of the aviators in France declined to accept any other lubricant for flights. The pilots had extreme confidence in castor oil. They thought there was some mysterious virtue in that oil because it does not mix with gasoline. It was found, however, that castor oil, then so popular in the rotary engines that were in use, is at a disadvantage in our present type of motor for airplanes because of the effect it has on the burnished copper plate. In fact, it is no longer thought of as a lubricant in comparison with the lubricating product of petroleum.

Of necessity many of the technical achievements that have been brought out by the Army and Navy in their development of airplanes are secrets preserved in the interest of national defense. One of the daring feats that is now capable of being repeated when necessary is the delivery of gasoline by airplane to another airplane or to a lighter than air airship, while both are traveling thousands of feet above the earth.

Another important discovery which permits an airplane or lighter-than-air airship to provide its own ballast while traveling is through the condensation of water from the gasoline. Strange as it seems a gallon of gasoline can be made to produce by condensers that have been devised more weight in water than was the weight of the gallon of gasoline. This means a great deal in aeronautics because without some such method for replacing the weight of gasoline as it is consumed the operation of the airship would be accompanied by a difficult problem.

OIL INDUSTRY SERVICE TO ROUND-WORLD FLIGHT

The Oil and Gas Journal, Tulsa, Okla.

The Chief of Air Service has directed me to forward you herewith, three photographs which may be used for reproduction in The Oil and Gas Journal. The total flying time on the flight around the world was 375 hours. The two planes that made the complete circumnavigation of the globe flew a total of 750 motor hours. A Liberty motor uses approximately 22 gallons of gasoline an hour and 5 quarts of oil. The first airplane, the one that crashed in the Alaskan Mountains, had flown approximately 20 hours on the flight. Lieutenant Wade's plane flew approximately 320 hours on the flight around the world. The fuel on the flight was placed at the stops as near the water as possible and when the planes landed they were either brought up to the shore, or small boats put out with drums of fuel. The fuel was pumped into the tanks of the airplanes by means of hand-pumps. A hand-pump was placed on the side of the airplanes to expedite the fuel transfer.

CORLEY P. McDARMENT,
First Lieutenant, Air Service,
Asst. to Chief, Information Division.

War Department,
Washington, D. C.

MORE AND BETTER FLYING COMING EACH YEAR IN THE UNITED STATES

By L. M. Fanning

With public interest and support, both of which have been stimulated by the inspiring performances of the round-the-world flyers, and of the Shenandoah and the ZR-3, aeronautical authorities assert that tremendous progress for aviation in this country is assured.

According to the Aeronautical Chamber of Commerce of America, American aviation needs no direct subsidy. It needs and expects only the help given any business, the development of which, for the common welfare and security is a national responsibility. The industry suffered through war expansion. It has been denied the assistance of law and forms of natural encouragement long accorded to other means of transport.

The principal necessity, according to this authority, is a Federal law. In the 5-year period since the Armistice, probably a score of bills and resolutions affecting the regulation and encouragement of American aviation have been before Congress but none has been enacted into law. Prominent Government officials and associations have declared in favor of enactment of suitable enabling legislation to govern the flight of aircraft and the airways over which they operate, thus encouraging aviation in the development of new services to commerce, and as important means of defense. It is believed that there is a reasonable chance of such legislation passing the next Congress.

In the meantime there is more commercial flying and better flying every year in the United States, revealed by statistics compiled by the chamber covering many phases of operation. There are many engaged in commercial flying who go about the country without any fixed base. These are commonly termed gypsy flyers and statistics concerning their activities are difficult to obtain.

On the other hand, fixed-base operators are making rapid strides in putting commercial aviation on the map. It is pointed out that these commercial operations are carried on, not only without the slightest assistance from the Federal Government, such as is given, either indirectly through routes, terminals, night lighting, etc., or directly through subsidiaries, by various foreign nations, but actually under the severe handicap of public timidity and indifference by capital, due to lack of a Federal air law. Whatever has been accomplished, therefore, is but an indication of the far greater achievements which could be reasonably expected were the proper encouragement provided.

Greater Air Mileage

Fewer fixed base operators reported to the chamber in 1923 than for the two preceding years, but their mileage was greater and the duration of their flights longer than in either of the two previous two years. The number of flights made and passengers carried was considerably in excess of the number for 1922 and rivaled the number in 1921, when "joy flights" were much more popular. There was about double the amount of freight carried in 1923, as compared with 1922 and 1921. The average charge per short flight was greatly reduced, and the aver-

(Continued on Page 128)

NATURAL GAS DEVELOPMENTS

Houston Industries To Get Live Oak Gas By Proposed Line

HOUSTON, Tex., March 21.—Advices from Baltimore state the Houston Oil Co. will issue notes to the amount of $7,000,000 to finance the proposed gas line from Live Oak County to the Houston district. These notes are for 10 years and carry 6½ per cent interest, according to the report. They will be underwritten by New York, Baltimore and St. Louis banking houses. Representatives of the financial institutions have recently visited the Live Oak County holdings of the Houston Oil Co., accompanied by officials of the corporation and the gas supply and market surveyed.

The Houston Oil Co. has five gas wells shut in on the Cartwright ranch in Live Oaks County, covering an area of 8 miles from north to south and 5 miles east to west. The gas sands are at 1,600 and 1,900 feet. Since the announcement of the financial deal, five rigs have been moved into Live Oak County and more acreage secured, so that the company will have approximately 100,000 acres under lease when its plans are completed. The line will be 220 miles long. It is understood orders for 20, 16 and 12-inch pipe have been placed with eastern mills.

It is not the intention of the company to handle gas for domestic consumption, but it plans to furnish fuel to industries, such as sulphur plants, oil refineries, cotton gins, sugar mills and other enterprises, now using fuel oil. The sulphur plants at Freeport, Hoskins Mound, Big Hill, Matagorda County and Big Creek, Fort Bend County, are large users of fuel oil, requiring from 3,000 to 5,000 bbls. per day. Most of it is topped Mexican crude.

Piping natural gas for such a long distance is a distinct innovation for south and southwest Texas. Gas engineers will be interested in the proposition of the Houston Oil Co. Wells come in with a tremendous pressure and the question is how long will the pressure remain after the wells are being pulled on for fuel.

The Southern Natural Gas Co. has been partially supplying San Antonio with gas from McMullen County for 2 years. The wells are about 80 miles south of the city. Recently the company laid 38 miles additional line to Live Oak County, connecting with the three wells of the Plateau Oil Co. and Texas-Pacific Coal & Oil Co. The gas sands in McMullen County are shallow, around 850 feet, and the pressure went off quickly when they were drawn upon.

AUSTIN, Tex., March 23.—The Houston Pipe Line Co. of Houston, capital stock $15,000,000, organized for the purpose of piping gas from the Live Oak County gas fields to Houston and intermediate points has been granted a charter by the Secretary of State.

According to D. A. Gregg, chief clerk of the State Department, nearly 100,000 acres of gas bearing lands have been conveyed to the corporation with production of approximately 8,000,000 feet per day. The company has already purchased 200 miles of pipe, Mr. Gregg said.

Incorporators are E. H. Buckner, A. S. Henley and W. W. Blocker of Houston, who with the following constitute the board of directors: Edwards Whitaker, St. Louis, Mo.; Murray Carleton, St. Louis, Mo.; L. S. Zimmerman, Baltimore, Md.; H. O. Head, Sherman; George Mackerbin, Baltimore, Md.; T. H. Kennerly, Houston; A. H. Kennerly, Houston, and C. B. McKinney, Dallas.

LOWE-JONES OIL GAS PROCESS OF INTERMITTENT HEATS AND MAKES

In the standard set of improved oil and gas apparatus, stack valves, blast valves and scrubber valves are hydraulically operated from a central control board, which also includes the operating mechanism of the oil, steam and other connections.

Both the primary and secondary generators are lined with fire brick, the primary generator being divided, by open arches, into two compartments designated on the sketch as A and B, the secondary generator being divided, by similar arches, into three compartments designated on the sketch as C, D and E, the generators being connected at the bottom with a fire brick lined throat-piece. The generator compartments A, B, C, D and E each contain checker brick in the customary manner save that the arrangement of these brick is especially designed to meet the requirements of this method of gas manufacture.

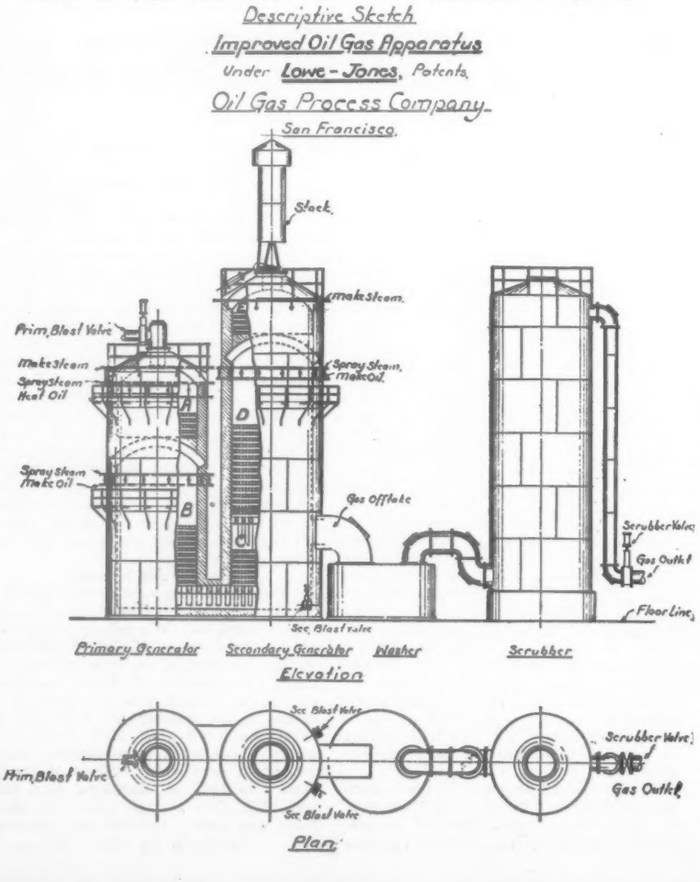
The primary blast for heating the gas-making apparatus enters at the top of the primary generator, there also being secondary blast connections at the bottom of the secondary generator, the products of combustion escaping through a stack valve at the top of the secondary generator from which point waste heat boilers can be added if desired.

Oil and steam pipe connections enter into the several compartments of the primary and secondary generators as shown, the gas off-take extending from the compartment designated as C on the secondary generator. Extending from the washer and scrubber are the customary overflow connections none of which are shown nor are any of the connections which are necessarily provided to supply water.

The process of gas manufacture is intermittent, and consists of alternate periods of heats and makes. In operating this apparatus air is introduced through the blast valve at the top of the primary generator, and oil, sprayed by steam, is burned in the compartment A, the products of combustion passing downwardly through compartments A and B of the primary generator, thence through the connecting throatpiece, thence upwardly through compartments C, D and E of the secondary generator, finally escaping through the stack valve at the top of the latter.

Upon the completion of a heating stage a making stage follows which consists in shutting off the oil used during the heating stage, closing the primary blast valve, closing the stack valve, and opening the scrubber valve, after which steam is introduced into chamber A of the primary generator, this steam passing downwardly through this chamber wherein it comes into contact with the highly heated carbon deposited on the checker brick through which operation a portion of the steam combines with the carbon to form blue water gas which gas, together with the highly superheated surplus steam, passes into chamber B wherein oil, sprayed with steam, is introduced for additional gas making. Simultaneously steam is introduced into compartment E of the secondary generator, a portion of which steam also combines with the highly heated carbon deposited on the checker brick, to form a certain amount of blue water gas which, together with the surplus steam, passes into compartment D wherein oil, sprayed by steam, is introduced for the purpose of making additional gas. It will thus be seen that the gases made in compart-

(Continued on Page 124)



RIGHT ON GAS RATE HELD BY RAIL BOARD

AUSTIN, Tex., March 20.—The authority of the State Railroad Commission to fix municipal gas rates was retained by the Senate after debate over the Moore bill and its substitute by Woodward.

By sending to engrossment the Woodward substitute, the Senate placed its approval on the railroad commission as an agency in the fixing of gas rates, but decided on some important changes in the present Cox law, which may be enacted when it comes up for final action.

The Woodward bill gives the right of appeal to the commission from orders of municipalities affecting gas rates, but the hearings must be in the city affected and appeals from the decisions of the commission must be heard in the district court of the city affected and not in Austin.

Senator Moore's original bill repealed the entire Cox law, giving the commission authority over the gas rates, but he later offered a substitute providing that there should be no right of appeal to the commission from any order of a municipality.

Senator Moore, who comes from Cooke County, declared that his bill was designed to give relief to north Texas cities "which had been dragged down to Austin" to have their battles settled. He declared that many cities had submitted to the raise of rates by the companies because they knew the companies "could wear them out" in the railroad commission and the courts.

Senator Woodward pointed out that his measure provided a small tax on the companies to assist in paying for any litigation arising out of rate controversies.

"To eliminate the railroad commission a step backward," said Senator Woodward. "The time is coming, I predict, when every State in the Union will have commissions regulating municipal utilities. The Texas railroad commission has served the State well and faithfully. Its power should be maintained and increased."

He charged the Moore bill was merely "an affort to settle a law suit now pending in the Supreme Court." This suit tests the authority of the railroad commission to regulate gas rates.

The Woodward substitute was adopted by 16 to 14 and sent to engrossment.

MAGNOLIA TO DOUBLE GRAHAM GAS PLANT

Preparations are under way by the Magnolia Petroleum Co. for the construction of a booster station on its Tucker lease in Section 25-2s-3w, Graham Field, Oklahoma, which will be used to aid in conveying gas from the Magnolia leases on the J. H. Bennett, J. F. Bennett, F. E. Tucker and R. W. Lahman farms, to its combination absorption and compression gasoline plant in the northwest portion of the field. The booster station is now being dismantled at Yale, Okla., and will be moved to the Graham district. Its employment will practically double the capacity of the gasoline plant and give it an output estimated at between 2,000 and 2,500 gallons daily. The compression end of the gasoline plant has already been completed and is making around 900 gallons daily.

HOUSTON CO. BUYS GAS AREA

HOUSTON, Tex., March 21. — The Houston Oil Co. has purchased 8,000 acres of the Drushel land near Edna in Jackson County for additional gas protection. This area has been prospected thoroughly for gas and proven. The land is southwest of Houston.

SPANG

Weldless Drilling Jars

for Under Reamers

"I have quit worrying and can sleep at night since I am using Spang Weldless Jars on the Under Reamer . . . . . "

So says a Mid-Continent Superintendent, adding:

" . . . . . But when I had to use regular jars I dreaded the ring of the telephone bell."

Spang Weldless Jars approach closer to absolute perfection than any jars made. That's why you feel safer when running them, and why they give from three to five times the wear that do ordinary jars.

Your neighbor runs Spang Weldless Jars. Ask him about them—then order a set from your supply dealer.

SPANG Thread Protector

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Excellent Joints
Greatly increased footage drilled
Elimination of Jar Fishing Jobs
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Three to five times as much service as other jars
Increased profits.

Spang & Company
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EQUIPMENT AND SUPPLIES

Catalogue Is Styled Encyclopedia on All Oil Field Equipment

A practical encyclopedia on oil field equipment is the way the new catalog of the National Supply Cos. has been styled. The catalog, No. 35, is being distributed among the oil and gas fraternity and exceeds any previous issue in appearance and completeness. The National's trade color—blue—has been embodied in the binding of the book.

It is evident from the display of new products that the National's engineers are succeeding in their endeavor to meet the ever changing demands of modern drilling. Throughout the pages of the book may be found machinery designed for faster and deeper drilling, together with many modern devices for pumping and refining.

Especially attractive is the arrangement of the major sections covering cable tool drilling, rotary drilling and pumping. All products are classified under these headings according to their uses. Important parts of major items are clearly illustrated and numbered. This feature should be of great help to users of products when ordering replacement parts.

Perhaps the most noticeable addition is the elaborate display of pipe line, gasoline plant and refinery equipment. Recognizing the increasing demand in this line of equipment, the National Supply Cos. has established a staff of field engineers who are specialists on this subject.

Other noticeable additions are the No. 3 National portable drilling rig designed for deeper drilling, new designs and sizes of ideal rotary drilling machinery and a display of National pumping powers, incorporating the latest improvements. Additions to the line of Superior engines for oil and gas fuel include the Superior heavy duty oil engines for pumping, and Superior compressors for gas station, booster and air plants.

The National standard rig irons are conveniently and attractively arranged. It is made especially easy for the buyer to select a set of rig irons for his particular needs.

PUMP ORDER PLACED FOR COLOMBIAN LINE

OIL CITY, Pa., March 20.—The National Transit Pump & Machine Co. has received a large order, the furnishing of pumping equipment for 360 miles of 10-inch pipe line along the Magdalena River in Colombia. The pumps are to be duplex 5½ by 24 power pumps of the Ranger type for which the Transit has been famous. They are for the Andean Pipe Line Co., which is building a pipe line to the Tropical Oil Co.'s concession recently purchased by the International Petroleum Co.

This new order is in addition to an order placed with the National Transit Pump & Machine Co. some time ago for pipe line collar clamps, pipe line tongs and other tools for the Andean Pipe Line Co. The tongs have already been shipped from the local shops and the work is now being started on the clamps. The latter will require several hundred tons of castings for their manufacture.

NEW FACTORY IN TULSA

L. M. Robinson, president of the A-1 Packer Corp. announces the opening of a new factory in Tulsa, giving the concern two factories, the other being located at El Dorado, Kans. The new factory is equipped with the most modern, motor driven machinery for the manufacture of oil and gas well packers. Needs of the trade in Tulsa territory was given as the reason for the opening of the new factory.

MILL PRICES OF OIL COUNTRY GOODS AND MERCHANT PIPE RIGIDLY HELD

By B. E. V. Luty

PITTSBURGH, Pa., March 23.—There has been a noticeable decrease in the amount of business secured by pipe mills in the past week, in both merchant pipe and oil country goods. In merchant pipe the decline in buying began over a month ago, as noted in recent reports. In oil country goods there were increases in bookings from week to week early in the year, apparently of seasonal character, then the rate held about stationary, and in the past week or two there has been a distinct decrease.

The pipe mills do not see that there has been any change in the general oil situation that would account for the decrease in buying now observed, and attribute the decrease, in part at least, to the fact that various producing companies have already arranged schedules for operation and have bought tubular goods ahead to take care of the program, so that these buyers do not need to be making extensive engagements at the present time. As to the lighter buying of oil country jobbers no explanation is offered. Possibly it is a case of the jobbers finding themselves, with recent purchases, comfortably stocked so that they are now awaiting heavier distribution.

As the pipe mills had a considerable volume of business booked ahead the lighter buying does not affect their operations appreciably, although if continued this influence would be felt in time. The pipe mills are operating at close to capacity, say at about 90 per cent on an average. In this operation they are aided considerably by the large volume of mine pipe business booked a few weeks ago. No additional line pipe business of consequence is reported at the present time.

Mill prices of oil country goods and merchant pipe are being held rigidly on the basis of lists issued nearly two years ago, pipe having made a remarkable record last year by holding steady when nearly all finished steel prices declined.

Steel Buying

In the steel trade, as a whole, there are reports of buying being decidedly light, but in view of the fact that February business, when summed up, made a considerably better showing than the current reports during the month would have indicated, the present statements may be taken with a little allowance.

There is good reason to suspect that in many cases when the steel mills complain of poor business it is prices rather than tonnage that they really have in mind. They cannot sell to any extent at asking prices, in bars, shapes, plates, sheets, etc., but when they go out with competitive prices orders are placed with one mill or another. While prices of some steel lines have remained stationery, there has been weakening in others. As previously reported, all the price advances attempted this year, in the latter part of January and the fore part of February, have failed, so that in no line are there any higher market prices ruling now than on January 1, and in some lines prices are definitely lower, although not much lower. Automobile sheets have not shown the greatest weakening and are selling at the lowest prices since the middle of 1922. Not a few sales have been made lately at as low as 4.40 cents, or at $4 a ton below the 4.60 cents price from which an advance was attempted late in November. The average of all steel prices, however, is above the low point of last year, which came about November 1.

Mill Operations

Steel mill operations have decreased a little in the past month in the Youngstown district, with a trifling decrease in the Pittsburgh district, while the Chicago district has been running substantially full for a couple months. Operations were a trifle better in the Youngstown district last week, so it cannot be said there is any pronounced general declining tendency. On all hands it is agreed that steel production in the next three months will be smaller than in the last three, when it was abnormally heavy and in excess of consumption, through buyers replenishing stocks. Consumption, on the other hand, is not decreasing at all so far as can be seen, and in some channels it is increasing with the season.

GASOLINE RECOVERY CORP. OPENS TWO NEW OFFICES

The increasing popularity of the Charcoal Absorption Process of natural gasoline extraction and the increasing number of plants now being built in all of the principal fields of the United States except Wyoming, has made it necessary for the Gasoline Recovery Corp. of Charleston, W. Va., patentee of the process, to establish two new scales and service offices—one in the Mid-Continent Field and the other in the California field—so that they can better serve their licensees.

V. C. Canter, who has been identified with the development of the charcoal process almost since its inception, has been appointed manager of the Mid-Continent office, which is located in the Wright Building, Tulsa, Okla. Before engaging in the research and experimental work of the Charcoal Absorption Process, Mr. Canter took an active part in the chemical warfare department at the American University Experiment Station, Washington, D. C., in which division was developed most successfully ways and means for handling poison gases during the war. During the past six or seven years, Mr. Canter has been actively engaged in research and experimental work relative to the process, and his work has taken him to all of the larger oil pools east of the Rocky Mountains.

Mr. Canter will have associated with him C. E. Lermond, a mechanical engineer with thorough experience in the installation of charcoal plants. Mr. Lermond received his training at Rhode Island State College and Massachusetts Institute of Technology, and during the past three or four years has superintended the construction of plants in West Virginia, Louisiana, Texas, Oklahoma and California.

In charge of the California office at Los Angeles is Richard C. Alden, formerly associated with the Chestnut & Smith Corp. and more recently with the Landreth Gasoline Co. as superintendent. The Landreth Gasoline Co. plant at Ibex, Tex., which was recently sold to the Phillips Petroleum Co., grew to be one of the largest plants in the Mid-Continent while Mr. Alden was its superintendent. This plant had a daily production of over 40,000 gallons, 10,000 of which was made by a charcoal plant installed there last summer to treat the residue vapors after they had passed through the oil plant. Mr. Alden is a graduate of Lehigh University and has been active in the natural gasoline industry for more than 10 years. He is a recognized authority on the testing, manufacture and properties of natural gasoline, and co-author with G. G. Oberfell of the recently published treatise, "Natural Gasoline." Mr. Alden's experience and knowledge of the industry admirably qualify him for the managerial duties at Los Angeles.

VERTICAL RUBBING RODS NEW FEATURE OF ROOF

Vertical rubbing rods are now being supplied as the latest improvement on the Wiggins floating roof. These rods prevent the shoes on the roof from catching on rivet heads and also prevent the shoes from scraping off the paint from the inside of the tank shell. Under the canopy roof, it was customary not to paint the shell, but since the shell is exposed to air when the floating roof is down, it is desirable to keep it painted, and the rubbing rods allow this to be done.

Severe tests to which several Wiggins floating tank roofs have been subjected during the past winter have proved the Wiggins type of roof to be thoroughly safe and satisfactory. Mr. Wiggins recently witnessed the behavior of a roof 93 feet in diameter with 3 inches of snow on it. No difficulty was experienced in the operation and the snow did not hinder the progress of the roof up or down in conformance with the fluctuating volume of the tank content.

Another extreme condition which the Wiggins roof has recently withstood, and which is regarded as a severe test, was the separation of about 275,000 cubic feet of gas a day. This gas entered the tank with the oil, and the inlet was just inside the shell, instead of being in the center of the tank where it should have been. The diameter of the roof was 60 feet, and the gas successfully passed out through the minute crack between the shell and the roof without any oil splashing up onto the roof.

Recently a tank roof 55 feet in diameter carried 6½ inches of rain which fell during one night when the siphon had been shut off. The water was immediately drained off in the morning when the siphon was opened.

In Olean, N. Y., Lima, Ohio, and Philadelphia, Pa., a total of five Wiggins roofs have weathered severe winter conditions without difficulty. Some were on tanks in which the level of oil changed constantly and some were on tanks with a more or less constant oil level. At Paulsboro, N. J., the owner of a Wiggins tank also reports no difficulty during the winter, the only precautions that he took having been to shovel off the snow.

It is estimated by Wiggins engineers that the evaporation losses in the United States this year will exceed $200,000,000, and they claim that the most effective way to reduce this enormous waste is to use the floating roof which they claim will eliminate 85 per cent of the evaporation. The roof was developed by John H. Wiggins, who conducted the original investigations for the Bureau of Mines, and is manufactured by the Chicago Bridge & Iron Works, of Chicago.

ORDERS 783 TANK CARS

Henry L. Doherty & Co. announces that the Cities Service Tank Line Co. has contracted with a large tank car manufacturing concern to build 783 steel tank cars, to be used by the Cities Service Refining Co., Empire Gasoline Co., Empire Refineries, Inc., Empire Gas & Fuel Co. and the Crew Levick Co. When these cars are delivered, the oil division of the Cities Service Co., will have about 3,000 tank cars in operation.

NEW STORE AT PANHANDLE

The Bridgeport Machine Co., of Wichita, Kans., is opening a new store at Panhandle, Tex., and will have it ready to serve the oil trade in that important section about April 1. C. L. Davis, formerly manager of the Sayre, Okla., store of the company, will be in charge of the new store.

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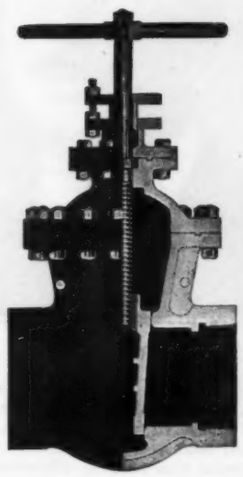
Better yet—eliminate the element of chance and luck where your heavy duty valves are concerned.

KEROTEST Valves are of the wedge-gate type which insures full opening and positive closing as well as perfect freedom for passage of the swab.



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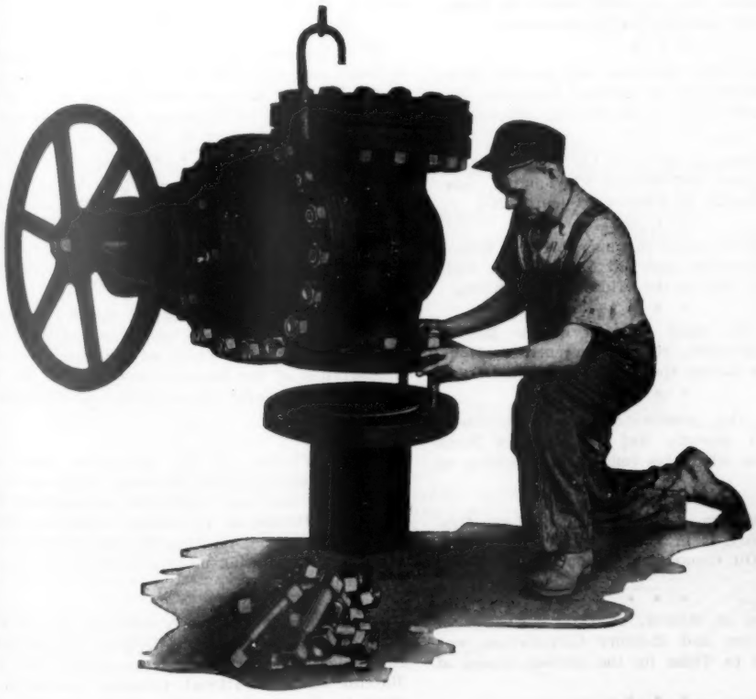
Old Lady Luck helps only the foresighted. Leading oil field operators regard KEROTEST Valves and Fittings as part of their standard equipment. Let us tell you the story.



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MEN KNOWN IN OILDOM

C. O. Stillman

C. O. Stillman, president of Imperial Oil (Ltd.), has been closely connected with the refining of oil and has always been prominent in Canadian enterprise in that field.

Mr. Stillman was born in Cleveland, Ohio, and began his career in the office of his father, the late Charles Stillman, an official of the Standard Oil Company at Bayonne, N. J. He tackled everything that came along with characteristic determination and thoroughness. He worked through all the different departments in the refinery and performed every operation from which he might benefit in ultimate knowledge.

Having thus obtained a close and intimate knowledge of the work of oil refining, he went in turn to several refineries in the United States, where he received thorough technical instruction in all the most up-to-date methods and appliances used in the process of refining oil.

While still a young man, Mr. Stillman went to Canada and became superintendent of the Bushnell Company (Ltd.), of Petrolia. This company was one of the pioneer Canadian oil refining enterprises. While directing the operations of that company, he became interested in the construction of the Sarnia Refinery, which undertaking was launched in 1897.

Although so closely associated with Sarnia, that plant was only the first of a series built for Imperial Oil (Ltd.) by Mr. Stillman. In the past few years he has planned and supervised the erection of five other refineries situated respectivly at Halifax, Nova Scotia; Montreal, Quebec; Regina, Sask.; Calgary, Alta., and Ioco, Vancouver, B. C.

In 1899 Mr. Stillman became a director and superintendent of Imperial Oil (Ltd.) He was made superintendent in 1901 and assistant general manager in 1910. Previous to his election to the office of president in 1919, he was a vice president of the company.

With Imperial Oil, (Ltd.) Mr. Stillman has been concerned chiefly with the refining department and its present high state of development is largely due to the time, thought and energy he has given to the work.

PERSONAL PARAGRAPHS

J. L. Minihan of Corsicana is in San Antonio, Tex., looking over oil prospects.

* * *

Carl Lumpkin of the Tulsa office of the Marland Oil Company, is confined to his home by illness.

* * *

C. R. Craft, has become office manager of the Montana Giant Petroleum Company at Kevin, Mont.

C. W. Stance of the Lone Star Gas Company is in San Antonio touring south Texas oil fields.

* * *

John Desmond, of the Bureau of Mines Station in San Francisco, was a recent visitor in Taft, Cal.

* * *

A. T. McCorkle, manager of the Shreveport office of the Dixie Oil Company, was a recent visitor in Tulsa.

* * *

O. L. Alcock, of the Sinclair Crude Oil Purchasing Company, was a recent visitor in Wichita Falls, Texas.

* * *

Charles Sabourin, of Tulsa, has resigned his position as head of the land department of the Dixie Oil Company.

* * *

Walter Anderson of the Winona Oil Company, Winona, Minn., has been in the Chicago market during the week.

* * *

Ray Miller, director of safety of the Mid-Continent Oil & Gas Association, returned to Tulsa from Ponca City, Okla.

* * *

H. L. Welch and R. M. Hart, of Billings, Mont., have been active in leasing lands on the Coal Creek Dome, south of Baker, Mont.

* * *

Julius Livingston, president of the Mazda Oil Corporation, returned recently to Tulsa from the Smackover Field in Arkansas.

* * *

John T. Crotty, president of the Republic Supply Company of Houston, Tex., is making a trip through Mid-Continent territory.

* * *

W. H. Jeffrey, Toledo, Ohio, is making a trip to Casper, Wyo., and points in Texas in the interest of the Eastern Torpedo Company.

* * *

H. Jensen of the Spencer Petroleum Company, is back at the Chicago office from a trip around the company's branches in the southwest.

* * *

S. L. Cranner, who has been drilling in the California fields for many years, has left for Borneo where he will drill for the Shell interests.

* * *

Owen E. Acton, who is operating in central and southern Oklahoma, was a recent visitor in Tulsa. Mr. Acton makes Guthrie his headquarters.

* * *

John L. Gray, vice president and general manager of the Shaffer Oil & Refining Company, has been spending the week at the Chicago office.

* * *

John M. Carson is back at his office after a brief trip to Tulsa and Kansas City and a vacation with his family at Excelsior Springs, Mo.

* * *

Arthur E. Raine, sales manager for the Wilson Oil Tools Corporation, has left Los Angeles, Cal., on an extended trip to the Mid-Continent fields.

* * *

Dr. Van Holdt, chief geologist of the Roxana Petroleum Corporation, returned recently to Houston, Tex., after having spent several days in Tulsa.

* * *

John Bates, vice president of the Reiter-Foster Oil Corp., left recently for the Balcones Fault region in Texas, where his company is blocking up acreage.

* * *

H. L. Woollenberg, general manager of the Beacon Oil Company, is in Venezuela, where the Beacon and Sun Oil Companies are operating producing wells.

* * *

C. A. Easton of Denver, assistant treasurer of of the Producers and Refiners Corporation, was recently called to Tulsa by the serious illness of his mother.

* * *

C. B. Reiney of Tulsa has been appointed to succeed G. F. O'Neill, who recently resigned from the land department of the Tidal Oil Company at Winfield, Kans.

* * *

Mr. and Mrs. Merle Volway of Petrolia, Ont., have left for Borneo fields. Mr. Volway has signed up for five years with the Royal Dutch-Shell Co. of Balik-papan, Borneo.

* * *

H. J. Whitehill of Tulsa, was recently visited by his father, Ben Whitehill of Columbus, Ohio, who came to look over his shallow sand production in the Nowata and Bird Creek Fields.

* * *

Howard Bennette, managing director of the Western Petroleum Refiners' Association, is recovering from an attack of illness which overcame him while at the association's convention in Kansas City.

* * *

C. E. Hathaway, president of the Stanley Belting Corporation of Chicago, is making a tour of the Mid-Continent fields accompanied by T. R. Bartlett, district representative who makes his headquarters in Tulsa.

* * *

F. A. Hillman of Los Angeles, president of the Standard Oil Company of California, and John A. Freyer, of Tulsa, chief engineer for the Barnsdall Oil Corporation, recently visited the Big Lake Field in Montana.

* * *

Lee Yealey, superintendent of the Ohio Oil Company's work in the Kevin-Sunburst Field, Montana, has fully recovered from his recent illness, when he underwent an operation in the Deaconess Hospital at Great Falls.

* * *

Larry Waterbury and C. L. Waterbury, president and vice president of the Hope Petroleum Company and the Berry Petroleum Company recently made a trip to Shackelford County, Texas, where they have extensive lease holdings.

* * *

C. G. Wells, engineer of the American Tank Company, has taken charge of the Tulsa district offices of the company following the resignation of R. O. Wehrheim, formerly Tulsa manager, who will enter the insurance business in Chicago.

* * *

T. J. Owen, formerly vice president of the Missouri Valley Refining Company, has been made manager of the lubricating oil department of the Waite Phillips Company. Dan Roberts is chief chemist and J. O. Green, engineer.

* * *

W. C. Langley, J. E. King and J. E. Beshears, of Tulsa, and C. F. Thornton, of Okemah, Okla., recently left for Loandra, Portuguese West Africa, where they will be employed as tool dressers for the Companhia de Petrolia de Angola.

* * *

George H. Thomson, for the past 12 years manager of the New York office of the Swartwout Company, manufacturers of ventilators, industrial ovens and steam specialties, has been appointed general manager with headquarters at Cleveland.

* * *

N. C. Beim, vice president of the W. H. Barber Company, was in Chicago last week. He was showing a letter heading which gave illustrations from photographs of the headquarters plant at St. Paul as well as the large branch plants at Chicago and at Spokane.

* * *

A. F. Whiting, of the accounting department of the Louisiana Oil Refining Corporation at Shreveport, has been appointed a member of the American Petroleum Institute's committee formed at the last annual meeting at Fort Worth for the purpose of instituting more uniform methods of oil accounting.

* * *

R. F. Hamilton, formerly assistant to the president of the Louisiana Oil Refining Corporation of Shreveport and more recently associated with E. R. Ratcliff in the National Gasoline Company, has gone to Bartlesville, Okla., where he will have charge of the gasoline production division of the Waite Phillips Petroleum C

Air Mail Service Becomes Necessity

Does Not Yet Pay Expenses But Development is Expected to Be Rapid and Extensive Within Few Years. Mail to South America

By Charles E. Kern

WASHINGTON, D. C., March 23.—The air mail service of the United States Post Office Department is rapidly becoming a necessity for the conduct of business. In no other of the advanced nations of the world are conditions so favorable to the establishment of an air mail service as in the United States, providing as it does a 3,000-mile journey from the industrial centers of the Atlantic Coast to the rapidly growing industrial centers bordering the Pacific Ocean. A 1,000 miles of travel for a letter of business importance is rapidly making mandatory the use of this new method of transportation.

It is not only the convenience of sending an order or some essential report promptly that is popularizing the air mail service. The fact is becoming more and more evident to the various business centers of the country that a city or large industrial community is seriously handicapped if its competitor city or community receives its mail by the air service while it is dependent upon the slower carriage by railroad. In the case of many orders for goods it is desirable to send along diagrams, sketches and specifications so that even the rapidity of a telegraph service cannot be resorted to as a substitute for the air mail.

During the calendar year ending December 31, 1923, there were carried by the air mail service 65,295,920 letters and the total distance traveled was 1,870,422 miles. The air mail service started on May 15, 1919, between Washington, D. C., and New York but this route was not long continued, giving way to a single transcontinental route from New York City to San Francisco by way of Cleveland, Chicago, Omaha, Cheyenne, Salt Lake City and San Francisco. This route is divided into three zones, one from New York to Chicago, another from Chicago to Cheyenne and the third from Cheyenne to San Francisco. The rate over each of these zones is 8 cents per ounce, 50 pounds being the limit of weight of a single passage.

Lighting Entire Route

This service now employes 42 pilots. There are 45 airships in conditions for use and 30 additional airships in reserve, in process of rebuilding and reconditioning. During the present fiscal year there has been appropriated for this service $2,750,000, which included the cost of installing lights for night flying and on July 1 the first lighted air way was provided from Bryan, Ohio, to Rock Springs, Wyo., which indicates the progress made in this respect up to date. The air mail service is now arranging for a lighted way from Cleveland, Ohio, to Bryan, and it is hoped to continue the lighted way from Cleveland to New York City or to Hazelhurst Field, L. I., which is the starting point for New York City. However, that will require more money than is now available.

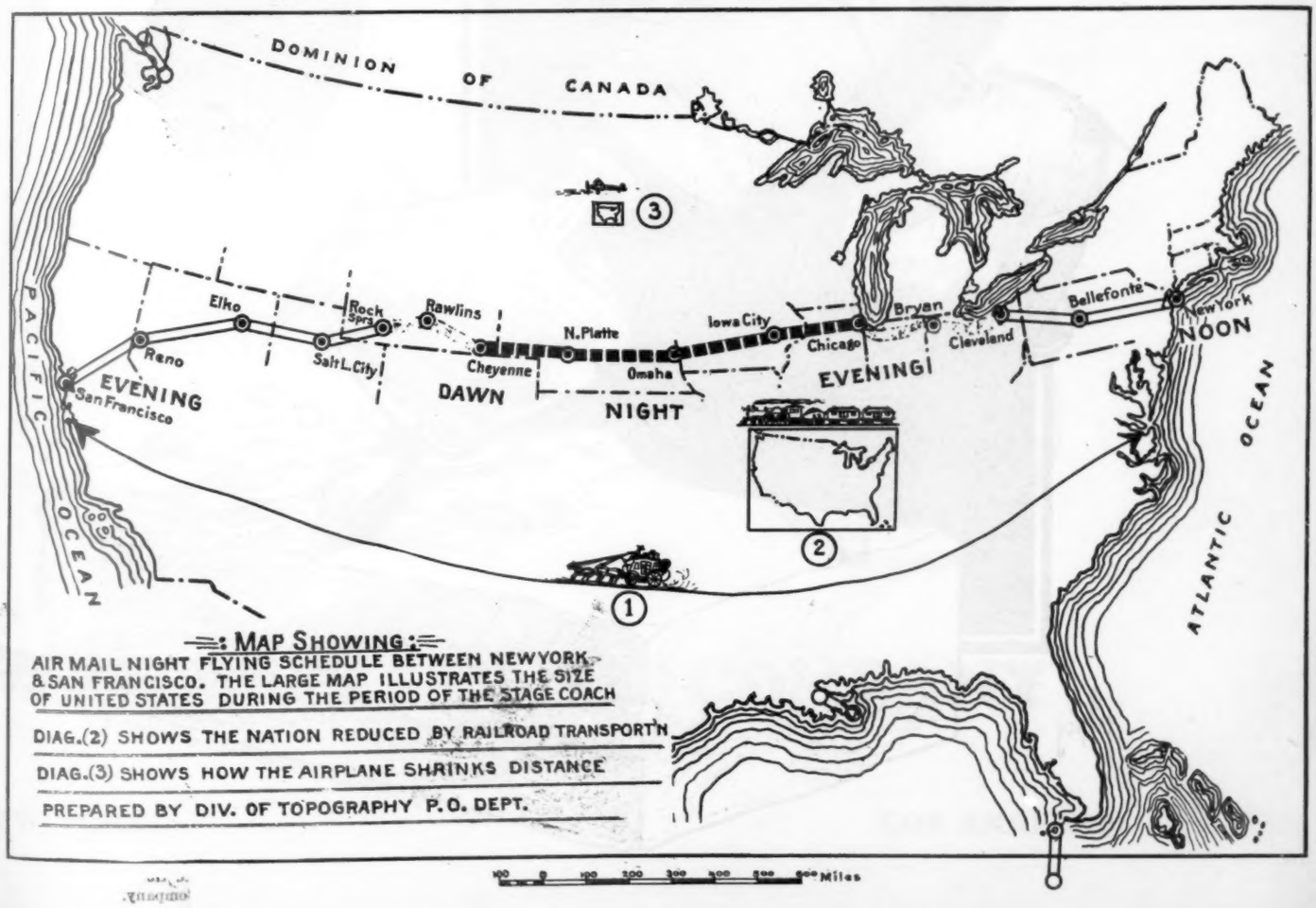
The future of the air mail service and the rapidity of its development will depend upon Congress. Statistics of the service will give ample proof to Congress that the demand predicted for it is rapidly being realized. For instance, during eight months of 1918 when the service was in its initial stage, letters carried amounted to 4,720,240; during 1919, there were 17,669,700 letters; 1920, 30,975,500 letters; 1921, 46,620,280 letters; 1922, 60,487,880 letters, and 1923, 65,295,920 letters. This indicated a very steady increase in the use of the transcontinental air mail.

Use Increasing Rapidly

The fact is one of the outstanding features of this service has been its regularly increasing use. In no instance is the force of habit and custom illustrated in a more marked manner than in the air mail. It has taken a long time for people to realize the advantage in time saving that is possible in the delivery of important letters and packages by means of the air mail. This applies not only to the line of route but to adjacent points. A letter mailed at New York at 10 a. m. eastern time reaches Chicago at 6:15 p. m. of the same day and is put down at San Francisco at 5:45 p. m. on the day following. Going west the mail is picked up at New York, Bellefonte, Pa.; Cleveland and Bryan, Ohio; Iowa City, Iowa; Omaha and North Pratt, Neb.; Cheyenne, Rawlins and Rock Springs, Wyo.; Salt Lake City, Utah, and Elko and Reno, Nev. Returning East this schedule is reversed.

At this time the air mail service has become a thoroughly established institution which could no more be curtailed or done away with than could any other branch of the Post Office Department. It is a business necessity. National and other banks are using it for the transfer of their checks and otherwise. Merchants place their orders in this way in many instances when they could not telegraph the details of their orders for goods. Insurance companies and many other large concerns require reports from their branch offices to be delivered by air mail. All kinds of mercantile, jobbing and financial houses, especially in New York and Chicago, are using this service. Banks would readily use it for the quick shipment of currency, but the Post Office Department has declined to accept such shipments because of the hazards incident to the air mail service and the inability to provide a proper guard for large sums of money. In case of an emergency when a financial dis-

(Continued on Page 120)



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Branch Shop—Tulsa, Oklahoma

PUBLIC SHOULD BE INFORMED ABOUT GREAT GROWTH OF THE OIL INDUSTRY

By N. O. Fanning

NEW YORK, March 23.—After all, the oil business does not change such a lot. The outstanding change which does take place is that of growth. It keeps getting bigger. There are a lot of people that are always trying to prevent that growth, knowingly or not. There are also a lot of people trying to help it. These people are the oil industry.

Outside of the industry is a large group of people, constituting perhaps 95 per cent of the population or more, who are either neutral or are ranged on one side or the other with reference to oil and its growth. The fact is beginning to be realized that that 95 per cent can just about wreck a thing when it starts going. On the other hand, it can also make a thing if it wants to. What is it going to do?

The number of people not in the oil business who are neutral on this question is diminishing day by day. Therefore the outside group is becoming more powerful every day.

Six months ago people were pointing to our storage tanks with oil in them and shrieking out the demise of the business. These stocks were pointed out as the final proof of the industry's inability to take care of itself. What was going to happen? Here was production at a high rate, tanks almost full, prices low and everybody, so it seemed, unhappy.

But how about that outside factor, the public—the consumer? There are a larger number of consumers of oil than producers. Each one has as big a vote as the producer. Was he satisfied? Not exactly, judging from the press. Yet he was practically the only beneficiary of the conditions referred to.

Another Age

All this was six months ago. That was another age. Today people are pointing to the storage tanks and decrying the fact that there are only so many millions of barrels available, and what are people going to do with production dropping and those tanks about to become empty?

After all, this oil in storage did not mean that the oil business does not know what it is doing. Oh, but how about the shortage of oil which is approaching? Does not that show that the oil business does not know how to take care of itself? Where are we going to get oil a year or two from now? What is going to become of us?

But, despite all this, the oil business does not change much. It has been feast and famine, prosperity and poverty, from time to time since oil was first struck.

Two or three months—or perhaps years—after the Drake well came in, a few men had the nerve to think they could make a business out of a product, the supply of which was nothing if not speculative. Most men thought, evidently, that as soon as those hundred wells that were producing went dry, these fellows would have to switch to some other line—perhaps turn to selling hogs, or something like that. People felt sorry for them.

But they went ahead just the same. They not only turned the crude oil, dirty as it looked, into quite a marketable, attractive product, but got a fair enough price so that they could pay more for the raw material. This encouraged others to look for crude oil elsewhere, although there did not seem much hope of finding it.

On finding that oil, the fortunes of the men who were trying to make a business of it depended. The oil was found. In fact, it still is being found. And these same men are still in business, according to the latest reliable rumors.

So now, today, they are beginning to wonder where the oil is coming from. But just as the oil business depends for its existence on finding it, so it will be found. How? Simply by the method, unpatented, which prevailed 60 years ago. By making the price attractive enough so that many who six months ago did not believe oil existed in a given locality, will go out looking for it.

No, the oil business does not change a whole lot.

Millions for Development

Just as an example of how the oil business is actually looking out for that 95 per cent we were speaking of, look at the fact that millions are being spent by it for development of big oil concessions in foreign countries, in jungles, at the bottom of lakes, and in deserts when there is every likelihood that the United States will still be producing oil 10 years from now, despite the Association of Calamity Howlers. Furthermore, this country may be producing more then per year than it has to date. However, wildcatters are human. They do not want to risk their hundreds of thousands unless they think they are going to get some of it back in the form of a fair price for oil if they strike it. If they don't strike oil, it's their hard luck, that's all.

A prominent oil man recently said that God would provide us with oil for the future, if it were needed. His statement was sniffed at by a practical oil man who believed that it took more than faith to get oil out of the ground, especially if it didn't happen to be there.

These two views represent the two sides of the question of future oil supplies. There are those who do not believe until they see. There are also those who believe without seeing. It takes both kinds to "make the mare go."

But the public, the consumer, cannot understand this difference of opinion. Not knowing, he is inclined to believe everything he sees or hears, even though it be contradictory, or else to not know what to believe.

The oil business is admittedly hard to understand. The more one has been in it, the more the fact is appreciated. Then, how is the public to know anything about it?

Informing the Public

How few steps the oil industry has taken to inform the public of the truth. What concrete steps have been taken besides the publication of "The Oil Industry's Answer" by The Oil and Gas Journal, aside from the advertising by many oil companies based on the meat that was in that "Answer?"

Oil men are often afraid to talk to representatives of newspapers, fearing that what they say will appear in distorted form. They therefore, in many instances, have been extremely prone to say "I have nothing to say." Many honest, industrious, newspaper reporters have accordingly returned to their editors empty handed, and, receiving a bawling out, have been ready to print what they could get their hands on, perhaps a statement by some senator from Idaho on the oil situation in Manchuria.

On the other hand, many leading oil men have taken the lead in talking to the newspapers in such a way that an intelligent, understandable message has been conveyed to the public, helpful both to the public and to the oil industry.

But nearly everything that has been done to explain things to the public has, for some unknown reason, failed to bring about a real understanding between the oil industry and the public, an understanding by which the public will know that the average oil man is taking care of his present and future oil wants in an economical manner, and by which the oil man will know that the public realizes this.

Last election proved, however, that such an understanding is developing. The public said to some of its representatives: "You're stuff is out of date, or it's fake, so we don't want you any more. Get out!" That is the handwriting on the wall.

But, the industry cannot sit back now and wait for further developments. Nor is it going to. For the public isn't sitting back, at all. Its legally chosen representatives are busy working out some

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5"x5" size (piston displ. 91 cu. ft. per min.) operates three No. 90 Riveters; or three No. 2S Calking Hammers; or two CC-25 "Paving Breakers;" or one "BCR-430 Jackhamer" Rock Drill; or two Trench Diggers; or two Backfill Tampers.

7"x6" size (piston displ. 160 cu. ft. per min.) operates five No. 90 Riveters; or five No. 2S Calking Hammers; or four CC-25 "Paving Breakers;" or two "BCR-430 Jackhamer" Rock Drills; or one "DCR-23 Jackhamer" Rock Drill; or four Trench Diggers; or four Backfill Tampers.

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method of bringing about actual, physical, material cooperation between them and the oil industry.

Square Deal All Around

When oil prices go up, the public wants to know that it's all right. For, who pays? The public. It is therefore up to the oil business to come across with the whole truth, and nothing but the truth.

Meanwhile, everybody's happy, or should be. It looks like a square deal all around. The oil business can have its troubles—and it wouldn't be happy unless it had something to fool around with like that—and the public can have its petroleum.

The time will come when an autoist will drive up to a service station, ask the attendant why gasoline is 5 cents higher than it was a month ago, and the attendant will not wink one eye and let his ignorance go at that. That will be the millenium.

Yes, there are breakers ahead, and the American oil industry is going to need the help of its public when its supply is not going to depend on the willingness of American wildcatters to go out in the Panhandle and the Grand Canyon and drill, but on the ability of the United States to protect its interests abroad. At that time most of our oil will be imported.

Perhaps that will be a question for our children. It certainly will be, if we don't do something about it. Hence, the Federal Oil Conservation Board. That, perhaps, is the expression of the public's desire to cooperate with the oil business for the good interests of each. There is something satisfying about the organization of this board. Why? Probably because it is trusted. Much of this trust lies in the personality of our President. The public thinks of Calvin Coolidge as his father does. He expressed it in those words: "He's an honest boy."

That is what the public should think of the oil business—"it's honest." Perhaps it does.

This is an exacting world. We want to know not only that the other fellow's honest, but that he is going to stay honest. So we must forgive each other if we trust each other "with one eye open."

The public is going to keep that eye open. So must the oil industry.

The oil business is going to keep growing. It will be larger, more powerful than ever 10 years from now. But after all, the oil business only justifies its existence so long as its existence is justified in the eyes of the public. That is something which the business must understand, and recognition of which will enable it to grow in the right direction. Old "Pro Bono Publico" is going to come out on top, so the best way is to keep on his right side.

Well, let's start the ball rolling by admitting that this recent advance in oil prices is justified, that it is going to bring us cheaper oil later on, and so far as the oil "game" is concerned, let's be like J. Pierpont Morgan, who was "a bull on the United States."

OKMULGEE CONTRACTOR DIES

OKMULGEE, Okla., March 20.—Julian James Stearns, Okmulgee oil man and drilling contractor, died recently in Wilson, Kan., as the result of injuries sustained in an accident on a drilling well in the Russell Field. Mr. Stearns, who was a partner of W. E. Sturdevant in the Stearns Drilling Co. came to Okmulgee from Buffalo, N. Y., in 1919, and has been actively engaged in the oil business since.

FUEL OIL CONSUMED BY LOCOMOTIVES WAS MUCH LARGER DURING PAST YEAR

A total of 63,206,034 bbls. of fuel oil was consumed by locomotives of the principal railroads in the United States in 1924, compared with 58,005,295 bbls. in 1923, according to returns received from railroads by the American Petroleum Institute. These figures include fuel oil consumed in all classes of service.

The total consumption in 1924 was made up of 51,251,563 bbls. of domestic fuel oil and 11,954,471 bbls. of Mexican fuel oil. In 1923 of the total consumption, 46,407,231 bbls. were domestic oil and 11,598,064 bbls. Mexican fuel oil.

It has been found impracticable to separate the locomotive use of fuel oil by the usual railroad or I. C. C. districts, but an attempt has been made to classify the use by geographical districts as follows: Eastern, Southern Middlewestern, Southwestern, Southwestern Pacific and Northwestern.

	1924		
District—	Domestic Barrels	Mexican Barrels	Total Barrels
Eastern	7,273	107,957	115,230
Southern	.....	1,469,858	1,469,858
Middlewestern and Southwestern	22,274,891	10,376,658	32,651,547
Southwestern Pacific	22,123,353	.....	22,123,353
Northwestern	6,846,046	.....	6,846,046
Total	51,251,563	11,954,471	63,206,034

	1923		
District—	Domestic Barrels	Mexican Barrels	Total Barrels
Eastern	8,106	125,456	133,562
Southern	.....	1,150,205	1,150,205
Middlewestern and Southwestern	17,126,042	10,322,403	27,448,445
Southwestern Pacific	23,270,602	.....	23,270,602
Northwestern	6,002,481	.....	6,002,481
Total	46,407,231	11,598,064	58,005,295

The largest consumption of fuel oil was shown in the Middlewestern and Southwestern district, totaling 32,651,547 bbls. in 1924 divided into 22,274,891 bbls. of domestic fuel oil and 10,376,656 bbls. of Mexican fuel oil. This compares with 27,448,445 bbls. in 1923, of which 17,126,042 bbls. were domestic fuel oil and 10,322,403 bbls. Mexican fuel oil.

Consumption in the Southwestern Pacific district totaled 22,123,353 bbls. in 1924 compared with 23,270,602 bbls. in 1923, all this oil being domestic fuel oil.

Consumption in the Northwestern district totaled 6,846,046 bbls., compared with 6,002,481 bbls. in 1923, all domestic fuel oil.

In the Southern district locomotives consumed 1,469,858 bbls. in 1924, compared with 1,150,205 bbls. in 1923, all Mexican fuel oil.

In the Eastern district the consumption totaled 115,230 bbls., of which 7,273 bbls. were domestic fuel oil and 107,957 bbls. Mexican fuel oil. This compared with 125,456 bbls. consumed in 1923, of which 8,106 bbls. were domestic fuel oil and 125,456 bbls. Mexican fuel oil.

These figures are practically complete for all roads using fuel oil, only a few small lines consuming very little oil having failed to make returns.

The figures for 1923 are revised and figures for 1924 are subject to revision.

Fuel oil consumed in road service by railroads having annual operating revenues above $1,000,000 totaled 50,122,310 bbls. in 1924, compared with 47,139,714 bbls. in 1923, according to the Interstate Commerce Commission. The I. C. C. report classifying consumption by railroad districts follows:

	1924 Barrels	1923 Barrels
Eastern district—		
New England region	2,786	1,332
Great Lakes region	149,714	156,043
Cent. Eastern region	66,548	73,286
Southern district	1,219,667	969,095
Western district—		
Northwestern region	5,440,357	4,561,367
Cent. Western region	24,265,476	24,273,005
Southwestern region	18,978,762	17,105,896
Total U. S.	50,122,310	47,139,714

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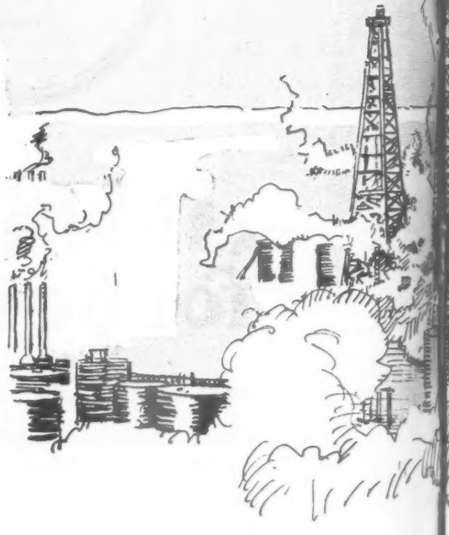

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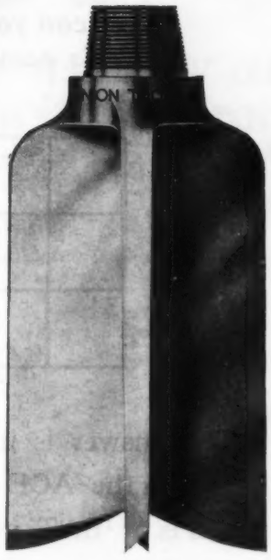

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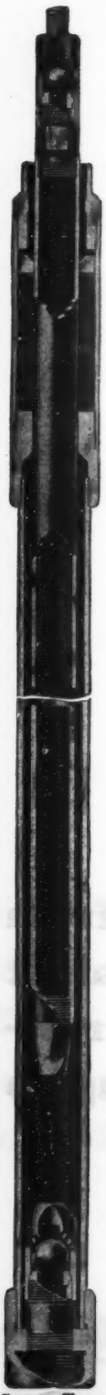

but can you solve this easy one?

1	2	3
2		
3		

The answer is in this sentence: "When the [2]ACE of Working Barrels is at [1]BAT, you'll find it to be a [3]TEX."

That sentence is a TRUE one. If you don't believe it, put a "Tex" in your WORST well and let it BAT for you for a while. You'll certainly find it to be the ACE—the BEST Working Barrel of 'em all.

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This is the answer. Did you get it?

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A	C	E
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ADVANCE TO STIMULATE DRILLING CAN BE JUDGED ONLY BY RESULTS

By N. O. Fanning

NEW YORK, March 23.—The wave of optimism which swept over this section as a result of the advance in crude and refined oil prices during January and February has been succeeded by a reaction in which the oil situation is painted in the blackest colors. The belief is becoming more general that the advance in prices will bring out the biggest flood of production the country has ever known. This, it is stated, will automatically depress prices and cause another period of excessive competition. As a final stab, it is believed by the pessimists that the recent advance will have stirred up enough agitation in Washington and at the State capitals to endanger seriously the status of the oil business politically, despite the change in Government at the last election.

Geologists, market prognosticators and others point to every likely looking oil discovery as a big new oil field that will flood the markets. It is stated that in central and north Texas, Colorado and in California large productive areas remain only to be drilled to yield up large quantities of crude petroleum. To cap the climax, stories are going the rounds with regard to an enormous field that an oil company in Mexico has been "holding back" and that is now ready to be opened up.

All these pessimistic utterances are a natural reaction to the recent sharp advance in prices. Most, if not all of these developments are prospective, and only experience of the near future will tell whether they are justified. But the curb on optimism and excessive enthusiasm is of real benefit to the oil industry. It serves to check speculation and brings even greater insurance of future prosperity than the recent advances in prices.

It must be said that the attitude of oil men here is one of waiting, and that excessive optimism or pessimism is confined more or less to those outside of the industry but interested in it one way or another. The effect of recent price advances has, it is true, resulted in record drilling. But this drilling has not yet, at this writing, developed a new pool of importance. The outcome of these drilling operations will decide the question as to whether 1925 will be a favorable or an unfavorable year for the oil business.

Rate of Drilling

This question of drilling is more interesting when the record of the wells completed during the past five years is considered, and not the estimated rate of activity at present compared with that of two or three months ago, before the price advances went into effect.

The record since 1917 follows:

1917	23,407
1918	25,665
1919	29,312
1920	33,911
1921	21,937
1922	24,689
1923	24,438
1924	21,894

The number of wells completed during 1924 was actually smaller than in any year since 1915. The average number of wells completed per annum during the last four years was 23,239, compared with 28,074 during the preceding four-year period from 1917 to 1920.

Inasmuch as petroleum production in the United States has increased steadily from 335,000,000 bbls. in 1917 to more than 700,000,000 bbls. in each of the years 1923 and 1924, the obvious conclusion is that the production per well drilled since 1920 has been bigger than in preceding years. This is true, as proved by statistics, and it is generally known that the big production of the last four years has been largely due to the bringing in of a succession of large flush pools, developing from nothing to 100,000, 200,000, 300,000 bbls. daily or more in output within a few months.

This bringing in of big pools with only a small amount of drilling has become such a habit it is the almost general impression new pools can be brought in with equal facility in the future. Careful consideration will prove, however, that only actual drilling will determine the reliability of this view. The recent advance in prices is having the effect of determining the facts in the only way possible, by the actual drilling of wells in wildcat territory.

In 1920 wells drilled in the United States were more numerous than in any other year in the history of the country, but the record production did not come until 1923. If this experience is any criterion, record drilling this year does not assure record crude oil production this year.

Facts Concerning Production

It is no secret that the sharp advances in crude oil prices this year have been criticized within the industry itself. Many have condemned them because they have believed it a foregone conclusion that the intensive drilling to follow would assure overproduction. However, the business of the largest consumers of crude petroleum necessitates an assured supply of raw material. They must know months in advance where their crude oil supply is coming from. This is more important now than ever, for with the arrival of the age of fuel oil, consumers demand contracts of from one to three years from the refining companies.

From the viewpoint of the consuming public it is more important to have an oversupply of oil than an undersupply. The petroleum industry must do its best to regulate the supply, however, so it can assure a supply, and yet make money.

It is a practical certainty that when recent prices advances were instituted, it was believed that without such increases crude oil production in the United States would begin to drop off rapidly in the next few months. The need for advances was therefore obvious. But as to the extent of the increases, what individual can estimate to the last penny the amount which it is necessary to pay to stimulate production to the desired extent? Is it not more or less of a gamble?

If a new flood of production materializes while prices are at their current levels, doubtless a decline in prices will follow. But if current prices do not bring about increased output, and consumption continues to gain, further price advances will be necessary.

In the April 17, 1924, issue of The Oil and Gas Journal it was pointed out that the pyramiding of oil production in the United States in recent years has been due to the fact that almost every new area that has been opened up for oil production has shown greater annual productivity per well drilled than the preceding development. This is admittedly a very difficult record to live up to.

The oil situation, present and future, is always befuddled by the multitude of conflicting views with regard to production, prices and so on. But so far as the leading refiners are concerned, the most important question is that of assuring a supply of crude petroleum for all times. They do not care to guess with regard to future production. When there is any indication of a falling off in the supply, the agent of price advances is used to determine exactly what new areas can or cannot be depended upon to offset the depleting supply.

MASTER IN CRACKING SUIT

CHICAGO, March 23.—A further step has been taken in the "cracking" suit of the Government against the Standard Oil Co. of Indiana, Standard Oil Co. of New Jersey, The Texas Co., Gasoline Products Co. and others by the appointment of Charles Martindale of Indianapolis, Ind., to take testimony. The defendants moved that the order be set aside and the court immediately overruled the motion. Martindale is a master in chancery in Federal court. It was stated the taking of testimony would begin soon, probably in the East.

twenty years!
Judge - that's a cinch
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Sept. 18 1924
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CENTRAL WEST

(Continued from Page 56)

hours, from a total depth of 1,457½ feet. This well proves beyond a doubt the existence of a second pay sand in the field. It will mean the drilling deeper of most of the wells that are producing from the first pay and eventually some of the failures may be given a few additional feet deeper drilling.

A survey of the field indicates that one of the essential things needed is a light machine that can be set up at little cost and drill the wells from the first to the second pay. There are 20 or more wells that will be given a deeper test providing a machine can be had for the work. An outfit of that kind can also get plenty of work in cleaning out wells, the operators in the field say.

The Schenck well is close to the flowing well of the U. S. A. Oil Co. on the Bailey farm to the west Nos. 3 and 4 have been located along the west line of the Springer farm and the U. S. A. Oil Co. will soon start additional wells on the Bailey farm. No. 2 Bailey which flowed since its completion over 1,200 bbls. of oil without a shot is now on the pump and showing close around 45 bbls. a day. The Aetna Drilling Co.'s lease on the Thomas Lamb farm adjoining the Bailey farm on the north is also getting a nice production and numerous good looking locations yet to drill.

The first tornado of the season that crossed Illinois and Indiana on March 10, struck the Payne Field and demolished a derrick for Ledford and Robinson on the C. C. Springer farm. Operators announce they expect close to 100 wells will be drilled in the Payne area by the close of July.

Chicago interests will put in a gas line from Payne gas field to Van Wert, Lima and Delphos. Gas has been contracted on both the producing and consuming end of the proposed line and plans are now being made to start construction. The Payne gas field in Harrison and Benton Townships of this county have been proven to extend 15 miles in length and approximately 4 miles in width. The gas comes from the Trenton Rock as no shale is found. Wells have been developed with a rock pressure of 575 pounds and 2,000,000 feet volume. Top of sand on gas wells ranges from 1,354½ to 1,379 feet.

A. B. Strouse of the Strouse Pipe & Machinery Co. of Fostoria, Ohio, has natural gas franchise just about ready to close for the town of Payne. A test for casinghead gas has just been made from the D. M. Lipps well in Section 9, Benton Township, on the Lentz farm, by the Bessemer Gas Engine Co., which showed 2½ gallons gasoline to 1,000 feet of gas.

The Richland Oil and Gas Co., operating two wells on the Clara Graham farm, Section 4, Benton Township, 1½ miles west and one-half mile south of Payne, has installed a large power plant and started Pat Denney, the pumper, working. Other wells will be drilled on this lease as soon as material can be moved.

Indiana

The Ohio Oil Co. has completed a very important wildcat well that may mean much for the southern section of the Princeton Field, in southwest Indiana. This well is in the northwest corner of the T. J. Parner 40 acres, in the south west quarter of the northwest quarter, Section 16, Monroe Township, Pike County and 3 miles almost directly west from the Spurgeon P. O., and south of the old Pike County field. The well struck top of the sand at 1,281 feet and bottom of sand at 1,289 feet, total depth of hole 1,306 feet, and showed a production of 105 bbls. the first 24 hours. Tichenour and others recently drilled a dry hole in a test on the northwest corner of the W. Owens farm, in the northeast quarter, Section 3, same township, and about 3 miles to the northeast of the Ohio's good well. The dry hole went to a depth of 1,275 feet.

In the northern direction from the old Trenton Rock Field of eastern central Indiana, an attempt will be made to extend the Payne Field of Paulding County, Ohio, westward across the State line, as E. Stevenson of Chicago, with J. A. Smithers as contractor, has moved a rig and drilling outfit a half-mile south of the town of Baldwin and only 200 feet west from the Ohio-Indiana State line from the half section road in Section 30, Benton Township, Paulding County, Ohio. This test will be about 3 miles west and 4½ miles south of the Payne Field that is now attracting considerable attention on the Ohio side. The test is in Allen County, Indiana, to the southeast of Fort Wayne.

Central Ohio

Quietude prevails in the central Ohio oil and gas belt owing to high waters and inclement weather. In Cannan Township, Wayne County, the Central Oil & Gas Co.'s second test in the northwest corner of the J. Gingery farm, Section 24, produced a volume of 1,500,000 feet of gas from the Clinton lime at a depth of 3,250 feet. The Ohio Fuel Gas Co.'s No. 2 well 1,600 feet from the south line and 300 feet from the east line of the S. L. Whonsettler, Section 20, produced 10 bbls. oil and 284 feet gas from a depth of 3,000 feet. The Illinois Pipe Line Co. has made a connection to the well.

In Grafton Township, Lorain County, the Logan Gas Co.'s No. 2 well 1,545 feet from the north line and 535 feet from the west line of the Fred Klinect farm, Lot 55, is a light gas well at 3,000 feet.

In Monroe Township, Holmes County, the Empire Gas & Fuel Co.'s No. 3 U. S. Davenport farm, Lot 5, is a very fair gas well. Same company has a light gas well in No. 3 Oscar Korns farm, Lot 3, and another in No. 1 T. T. Finney farm, same lot. In Hardy Township, same county, the East Ohio Gas Co.'s No. 3 J. Uhl farm, Section 23, estimated at 35 bbls. from the Clinton lime.

Illinois

That the Plymouth-Colmar Field of McDonough and adjoining counties in western Illinois will be rejuvenated goes without saying for the Ohio Oil Co., the big owner of wells in the field, is installing four huge vacuum pumps and using in the work 127,000 feet of 2-inch pipe and 60 feet of 3-inch pipe to connect the system, expecting to increase the production of the old wells from 400 to 800 bbls. a day. If the system proves right, others may be installed in sections of the State.

The Plymouth-Colmar Field on March 5, 1914, was started forward for a producing field. A well was obtained showing 5 gallons of crude from a depth of 425 feet in Section 20-4-4w, in Lamoine Township, McDonough County. The prospecting that followed resulted in the opening of the Colmar Pool on the Hoing farm in the southwest quarter of the northwest quarter Section 16 of the same township. The oil was found in a sand later designated as the Hoing sand, at a depth of 417 feet. This well showed a flush of approximately 40 bbls. and great excitement followed and by the end of 1914, about 200 wells had been drilled in the district, of which 59 were rank failures. The initial output of the producing wells totaled 3,989 bbls.

The pool developed in 1914 lies on a flat part of the oil sand at the northeast side of a well-defined dome, the top of which had produced only small showings of oil up to 1915. No. 1 Roberts, near the center of Section 28, St. Marys Township, Hancock County, was located at the south end of dome and produced 45 bbls. natural. Others were drilled immediately, but all found salt water in the sand. In July, 1915, drilling on the Hamm farm at the apex of the dome in Section 19-4-4w, Lamoine Township, McDonough County, developed wells good for 100 bbls., and this pool furnished most of the development of the year. Another small area of good production was located near Colmar in the south part of Section 18, of the same township.

The oil sand lies at or near the base of the Niagara limestone, known as the "second lime." It was probably deposited in depressions on the surface of the shale

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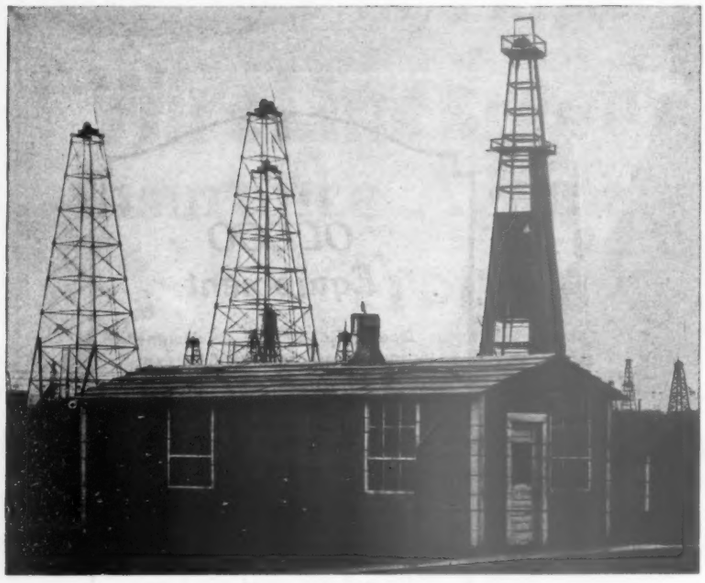

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that underlies the limestone, and therefore the sand exists as lenses separated by areas in which the limestone lies directly on the shale with no intervening sand. No direct connection is apparent between the Hoing Pool where the sand lies 90 feet above sea level and the Hamm Pool in which the sand is 70 feet higher. Likewise the pool at the town of Colmar lies on the north side of the dome and probably has no direct connection in the sand with either of the other two pools.

In November, 1915, 106 wells belonging to the Ohio Oil Co. yielded about 3,450 bbls. per week. Most of this oil was produced by the comparatively small number of wells in the Hamm Pool. In 1915, 130 wells were drilled in McDonough County having an initial production of 2,592 bbls. per day and 32 were dry.

Location of Quadrangles

The Colchester and Macomb quadrangles lie in west-central Illinois between latitude 90° 31 feet west and 91° west and longitude 40° 15 feet north and 40° 30 feet north, embracing an area of approximately 455 square miles. In this territory is included nearly all of southern McDonough County, a strip 5 miles wide on the east edge of Hancock County, and a strip 2 miles wide in the north edge of Schuyler County.

Description of Rocks

The thick cover of loose surface materails conceals in many parts of the region the regularly bedded, indurated rocks beneath them. Scattered outcrops of the older beds are fairly numerous, however, in most of the deeper valleys in all parts of the Colchester quadrangle, except near Troublesome and Spring Creeks. The older rocks have been reached by the deep wells near Birmingham. The deep drillings confirm the well established geological principle that there are no commercial coal beds in strata lying below the Pennsylvania series.

Gas in Surface Deposits

Pockets of gas in sandy portions of the surface deposits are quite common in Illinois, and several have been found in the region in the Plymouth-Colmar Field. These accumulations are probably derived from the decomposition of vegetable matter in the deposits themselves and do not have any necessary connection with deepseated oil or gas. They can be used to heat and light a few houses, but the yield is too small for commercial purposes. G. E. Flint bored two wells at opposite corners of his house. 5 miles south of Colchester, southeast quarter, northeast quarter, Section 6-4-3, each 87 feet in glacial clay and with sand at the bottom. Gas came from the sand under considerable pressure and was used for cooking and lighting in Mr. Flint's for more than two years, until the wells became choked with sand. A well at the Price and Gunning clay plant at Industry is reported to have struck gas at a depth of 90 feet that was under sufficient pressure to throw mud 20 feet in the air. A few other wells in the region have encountered small quantities of gas at shallow depths, presumably in surface deposits.

Encouraged by the presence of gas pockets in the surface deposits and of small oil and gas seepages that are common in parts of the region, a company was formed some years ago to prospect near Birmingham. Four wells were drilled within the limits of the Colchester quadrangle and one (No. 3), a short distance south of it, between Flower and Williams Creeks. Well No. 1 was drilled in the bottom of a small ravine near Flower Creek, northeast quarter, southwest quarter Section 9-3-4w, at an altitude of about 530 feet. The St. Peter sandstone was reached at a depth of 1,025 feet and continued to 1,125 feet, where drilling was stopped. Mere showings of oil were found at three horizons, said to be at depths of 511, 750 and 900 feet. the first is doubtless from the Hoing sand) and a strong flow of highly mineralized water came from the hole. Well No. 2 was on the upland northwest of No. 1, northeast quarter, northeast quarter, Section 8-3-4w, and was abandoned at 815 feet because of a broken casing. Small quantities of gas was reported showing. Well No. 4 was drilled on the flood plain of Crooked Creek, altitude about 500 feet, three-fourths of a mile above Birmingham, southeast quarter, northwest quarter, Section 2-3-4w. One report is that drilling was discontinued at 610 feet because of lost tools. Another places the total depth at 482 feet. This well was shot at 435 feet, near the base of a 20-foot oil sand. (This probably is above the Hoing sand.) It is said that about 2 bbls. of oil could be bailed out each day. Well No. 5 is a short distance east of No. 2 and on the same quarter section, at an altitude of 620 feet. Drilling was stopped in standstone at a depth of 1,608 feet. with no signs of oil or gas. Water was found at 60 feet and more at 700 feet.

Possibilities of Field

Briefly stated the conditions essential for the accumulation of oil or gas in commercial quantities are: (1) a porous stratum in which the oil or gas may circulate; (2) an impervious cover, commonly a shale, that overlies the porous stratum and prevents the escape of the oil or gas to the surface; and (3) rock structure such that underground reservoirs are formed. The first two conditions are met in this region at several stratigraphic levels. The rock structure appears to be favorable in at least one locality. There are, of course, in oil fields many areas where all the conditions appear to be right, but where no oil or gas exists.

Where the deep-lying rocks are saturated with water, as they are in this region, the oil and gas is forced upward through the porous rocks until it encounters an impervious stratum. If the beds are not perfectly level, and usually they are not, the oil and gas move up the dip until they reach a place where the direction of the inclination changes and where continued movement in any direction in the porous stratum would necessarily be to lower levels. Under these conditions accumulation takes place in the anticlines or arches, or at the upper borders of dipping porous areas, where the porous rocks are at higher altitude than in adjacent areas.

It is, perhaps, significant that the best reported showing of oil was in the well No. 4, the one situated nearest the crest of the dome-shaped anticline, and it is unfortunate that at least one of the drilling was not made in the more promising territory. A similar but less pronounced dome exists near the town of Macomb. The city water well at Macomb, though apparently favorably situated, pierced no notable quantities of oil or gas. The altitude of the top of this well is 700 feet, the depth to the top of the St. Peter's sandstone, 1,135 feet, to its base, 1,360 feet, and to the bottom of the well, 1,360 feet.

Possibilities are for a considerable amount of new development work in McDonough, Hancock and Schuyler Counties during the summer and fall season. Just at this time but one well is under way which is drilled by Charles Measley on the Adams farm, in Lamoine Township, McDonough County.

No new completions are reported from the older producing regions of Illinois for the past several days, with Wabash County in the lead in new work under way.

KENTUCKY-TENNESSEE

(Continued from Page 56)

below the black shale. In the vicinity of Richpond, Clider Brothers got a duster in No. 1 on the Berry-Robinson place at 130 feet below the shale. This test caused quite a bit of disappointment as it was hoped the deep pay would show commercial production. So far no production has been obtained in this immediate vicinity below the Mississippian lime usually found from 450 to 500 feet. The only new operation started during the past week was No. 5 on the Wilson farm operated by G. McGinley.

In Allen County, only 17 well are drilling, which is possibly the lowest point it has reached in over two years. Two wells were started during the week, both in the southwest area, the Central

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Southern Oil Co.'s No. 2 Sid Goodrum and Bastrus & Sons' No. 1 Bill Dennis.

In the southwest territory, Guy and others got a dry hole on the Costello tract at 400 feet and Bastrus & Work's No. 6 Lyle was plugged at 412 feet.

Cumberland-Monroe Counties

W. S. Raydure's No. 1 M. E. Coop has been deepened to 790 feet, 300 feet below the cave, where it is pumping 15 bbls. daily. This property is in the Sulphur Creek extension where a number of fine producers has recently been completed. No. 2 on this farm started off at 35 bbls. per hour at 320 feet below the Pencil Cave. In this same area, the Kanawha Oil Co. is drilling No. 3 Mrs. Coop at 600 feet; Carter & Combest's No. 2 Huddleston-Payne is 320 feet below the cave and drilling. At 340 feet under the oil filled up 150 feet in the hole. Hook & Wise's No. 1 Ves Nun is still held up in completion with a fishing job on top of the Sunnybrook sand where it is showing for a commercial producer.

At Kettle Creek, Newman, Petit & Hagen's No. 1 Hiram Wells is dry at 900 feet, 102 feet below the Pencil Cave. Fourteen feet of 8¼ and 400 feet of 6¼-inch casing was set in the hole.

Freeman & McCormick's No. 1 Travis Bow, at Bear Creek, is progressing at 145 feet. This is to be a deep test.

Hiland R. Smith, field manager for the Oil Fork Development Co., has been named as an active vice president of the Oil Producers' League in charge of Cumberland and Monroe Counties.

Owensboro District

The starting of six new wells features the past week in the Owensboro Field.

In the Pellville district, the Kentucky Oil Co.'s No. 17 Amanda Stewart is spudding; Bert Thompson is moving a rig to drill No. 5 Brown, 360 feet east of No. 2 and the same distance west of No. 3.

At Collier Station, the Wood Oil Co. is moving to No. 4 location on its J. M. Bartley farm, 400 feet north of No. 2; C. A. Leeper and others are spudding in No. 2 Beauchamp, 400 feet south of No. 2 J. M. Bartley; Thomas and others are spudding in No. 4 J. H. Evans, 400 feet north of No. 1.

Other Operations

Mosley Oil Co.'s No. 1 Mosley, shut down in the sand; Pellville Oil Co.'s No. 1 Gabbard, shut down; Thomas and others' No. 1 Hoffler, no report; Evansville parties, drilling a test near Beda; I. N. Harkless' No. 3 Dick Spurrier, location; C. A. Leeper's No. 1 Veach, location; Panther Creek Oil Co.'s No. 4 J. W. Smith, drilling at 400 feet; C. E. Daugherty's No. 3 Wildow Crowe, showing for a light well in the Jett sand; being drilled deeper to the Barlow; Pennsylvania-Indiana Oil Co.'s No. 1 Col. Powers, drilling at 150 feet; same company's No. 1 James Phillips, rigging up to offset No. 1 Widow Crowe; Thomas and others' No. 3 Evans, shut down in the Jett sand.

South Weir Field

The best well of the past week in the eastern division is the Short Fork Development Co.'s No. 1 J. M. Frazier in district No. 31 of the South Weir Field in Johnson and Magoffin Counties. It started off at 20 bbls. from the Weir sand and extended production slightly to the northeast.

In district No. 29, Hudson & Collins' No. 6 on the H. Grace place made a 1-bbl. stripper from the Weir.

North Weir Field

In district No. 32 of the North Weir Field in Lawrence and Johnson Counties, the Union Gas & Oil Co. made a 15-bbl. strike in No. 3 on the J. E. Holbrook, No. 3 farm, at 785 feet, in the Weir sand. This concern is cleaning out No. 3 Caney Sparks, No. 1 C. E. Frailey, No. 3 Jean Holbrook and Nos. 7 and 8 on the C. K. Dobyne tract, Nos. 6 and 7 W. D. Lester were drilling in lime as is No. 31 on the P. P. Holbrook; No. 2 on the R. N. Sparks is rigging up.

The Indian-Tex Petroleum Co. finished No. 13 on the G. Gilliam, district No. 22, for 12 bbls. in the Weir sand.

Elliott County

A semi-wildcat drilled by McConnell and others on the T. W. Kelley farm, near Isenville, in Elliott County, was reported dry and plugged at 850 feet. Wheeler & Campbell's No. 5 S. J. Peters made a 2-bbl. stripper from the Weir sand.

Lee-Owsley County

In the Idamay area of the Lee-Owsley County section, the Petroleum Exploration's No. 1 Tom Quillian tested 2 bbls. at 1,312 feet. It also serves to extend production to the south. The Petroleum's No. 1 C. Gourley in the same vicinity is pumping 2 bbls. at 1,200 feet after being on the pump for 1½ years. No. 2 was a gasser at 1,300 feet.

In Boyd County, the Summit Oil Co. struck gas in its third well in the Summit region. The gas was encountered in the Berea sand and the test will probably be drilled on down to the Corniferous. It is in this section of Floyd County that the American Roller Mill Co. has let contracts for the drilling of 15 wells.

In the Big Sinking neighborhood of Wayne County, a test made by George A. Hook & Co. on the James Catron homestead was dry and plugged below the Beaver sand.

AIR MAIL SERVICE BECOMES NECESSITY

(Continued from Page 105)

aster might be averted by the shipment of cash an exception to this rule would be made.

Quite a Convenience

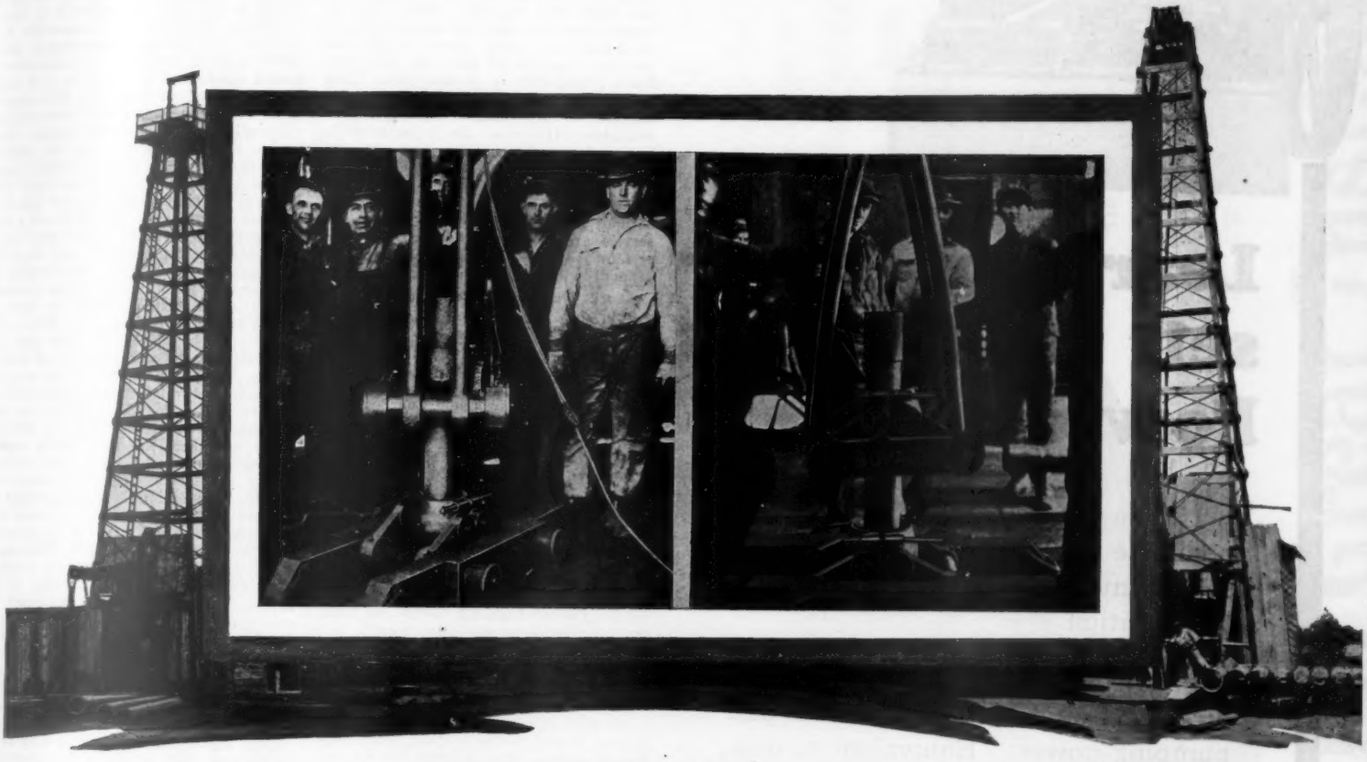
There are many indications that gradually people are awakening to the convenience of the air mail. In one instance a piece of machinery was so transported when the postage on the heavy metal, although large, was trifling compared to the saving accomplished. At least in one instance a tourist in San Francisco with his passage engaged across the Pacific had his tailor in New York City send him a suit of clothes, the postage on which was $20. The motion picture people of California are using this service for the dispatch of their films to the Atlantic Coast where they have distributing centers. The Democratic National Committee during the present campaign used the air mail service for the quick dispatch of 200 pounds of campaign literature. Morgan & Co. sent by air mail about 400 pounds of their advertising matter circulated in connection with the German Government loan.

As an instance of the lack of habit in the use of this mail the city of San Francisco is given as an illustration. A month ago San Francisco was providing mail for the air service to the extent of 130 pounds per day. A young man was sent to San Francisco with a moving picture outfit illustrating the conduct of the air mail service, and he accompanied the showing of these pictures with a little talk about the various uses and advantages gained by sending mail through the air. Many business men realized for the first time that their methods could be changed to their advantage and that they had been mailing their letters not intelligently but merely according to long established custom. The result of this little educational campaign was the immediate increase of the air mail from San Francisco from 130 pounds to 170 pounds per day. But while they were slow to abandon their old postal habits, once they had changed them the advantage was so positive that they have continued to use the new method. The steadiness of the air mail service in respect to the continued use of its facilities by those who have once adopted them is one of the striking characteristics of that branch of the Post Office Department. The air mail service leaving New York and San Francisco is so regular in bulk that the Post Office Department can estimate almost exactly the weight of mail they have to carry each day.

Does Not Pay Expenses

The air mail service at this time does not pay expenses and no one expects it to do that until it has been more fully developed. During the first quarter of the present fiscal year, that is, during the three months of July, August and

BOVAIRD



Good-by to Old Style Elevator and Spider

"THIS crew feels like a new gang," writes A. Bertram, Driller on John Leak No. 1, near Chandler, Oklahoma. When they first came here and tried to handle wells over 4,000 feet deep with old style equipment, they had a peck of trouble running casing. This old stuff was all right on wells from 1,800 feet to 2,500 feet and would do in a pinch on 3,000-foot wells, but it was "good night" when they were deeper.

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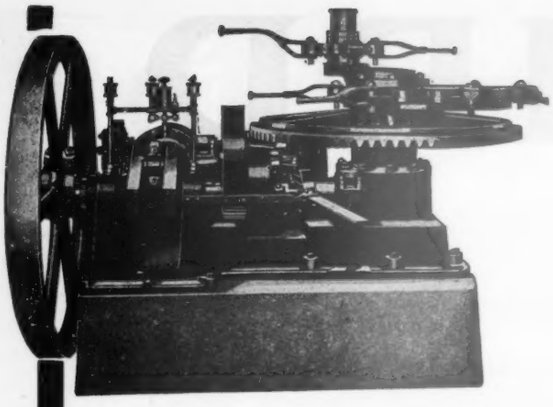

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September, the operating expenses of the air mail service were from $100,000 to $125,000 a month, and the income was about $50,000. For a new service of this kind this result was all that could have been expected. Necessarily a growth in the mail so carried will result in lower costs. It now costs $40,000 to build one airplane suitable for the postal service but 25 airplanes of the same kind could be built on a single order for $10,000 each or perhaps for less than that amount. With the increase of service which is bound to come, airplanes will carry more nearly the maximum amount of mail that has been found practicable up to this time. This amount is now limited to 500 pounds because of the limited cubical space available. However, the department is looking forward to heavier than air craft capable of much more efficient performances. At the present time 400 horsepower is used to carry 500 pounds of mail but the officials of the air mail service are confident that within three or four years they will be carrying a ton of mail with that same horsepower.

Depends Upon Cities

The future development of this service will depend upon the demand made upon Congress by cities, communities and business interests. It is not likely that there will be extensions unless pressure is brought to bear upon Congress for them. At this time Los Angeles and San Diego, active commercial rivals of San Francisco, are very anxious to have the air mail extended to them. The cities of Puget Sound are awakening to the advantage of this service. The development of the service must be along business lines so that a certain amount of mail matter will have to be anticipated before the service is extended to additional centers. This will be the case unless Congress should desire to treat the air service in the same way it has treated the river and harbor improvement, that is by making appropriations for a specific purpose covering air routes Congress desires to have served.

At this time the great bulk of mail matter passes between New York and San Francisco as that route touches the great industrial centers of the country. Southern States, for instance, do not yield large quantities of mail matter in bulk and if the extension of the service is based on the quantity of mail offered for transportation that section cannot be included in the air mail service for some time to come. However, it is not unlikely that eventually the general principles upon which the mail service is conducted, which is to serve all sections equally regardless of the financial result will be adopted. That would lead to a complete air mail service around and through the United States, touching the great central distributing points of each section.

The service is making a very extensive investigation of all sorts of problems with which it will have to deal. There has been a great deal of talk about a transatlantic air service and a service to South America. The business sense in linking South America more closely to the United States is apparent to various industries. However, the costs mount very high and the bulk of mail matter going from North to South America and return is not at this time indicative of a paying enterprise. As a first step in that direction the Post Office Department has sent two young men to visit Mexico and Central America with a view to ascertaining whether the countries located north of the Isthmus of Panama would cooperate on some basis of sharing the expense incident to such a service. These young men will return shortly to Washington and their report will indicate whether it is possible to begin that service at this time. The expense will be very large so that it is doubtful whether the Spanish speaking nations between the United States and Panama will feel warranted in making the necessary appropriations. At any rate the basis for a division of this expense will be discussed and there is little doubt that eventually Congress will be willing to do the lion's share in carrying out this project. So far as South America is concerned there will have to be met a very heavy deficit in an air service which in this case would call for dirigible airships of the Zeppelin type. The outcome of that project will come along with the plan for carrying transatlantic mails through the air.

Development of Dirigibles

The present ambitious plans of the Goodyear Rubber Co. for the building of airships for the transatlantic service to carry passengers and mail will have much to do with the solution of these problems. It would not be possible, for instance, to increase transatlantic mail rates without revising the international postal rules, and that can be done only at the end of another four years unless there should be some special international convention to consider that matter. This is not at all probable. At the present time the aggregate of mail matter passing between this country and Paris and London is about 8,000 tons per day and it costs only from $6,000 to $7,000 a day in postage to carry that mail both ways. Undoubtedly if there is a mail route by dirigibles it would not be undertaken at the present postal rate. Some improvements in the dirigible must be made to lessen the cost of a voyage. Those airships must be able to descend and elevate without the attendant loss of helium which is now necessary in descending and which involves many thousands of dollars loss. The decrease in the cost of helium would tend to lessen this expense but there are now under consideration other methods for that purpose.

The air service with its present restricted application is using gasoline at the rate of 40,000 gallons a month and the present expenditure for gasoline and oil is about $13,000 a month. That seems a small amount but it is only a beginning and it is a clear addition to the new uses for gasoline and oil which involves no curtailment of any other use. It does not represent fairly the vast quantities of gasoline and oil to be developed for this service which eventually it is believed will to a large extent go hand in hand with the transportation of passengers.

This entire air industry is only in its infancy so that within a few years the consumption of motive power and lubricants by the postal service will increase beyond any present calculation.

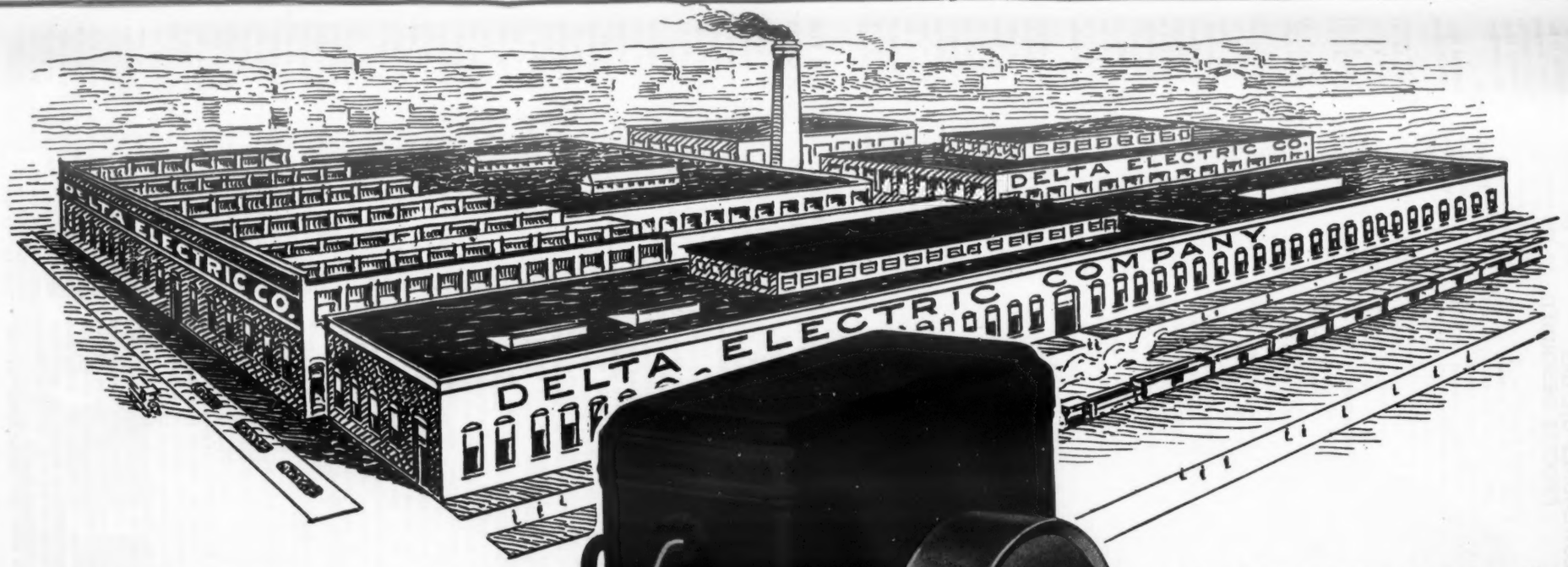
ANNUAL MEETING OF MAGNOLIA PETROLEUM

GALVESTON, Tex., March 20. — A dividend of 1 per cent, payable on or before April 5 to stockholders of record March 12, was declared at the annual meeting of the Magnolia Petroleum Co. here. A cash dividend of 1 per cent was ordered, payable on or before July 5 to stockholders of record June 19, and a further stock dividend of 1 per cent payable on or before October 25.

The trustees held their annual meeting and elected the following officers of the company: John Sealy, chairman of the board of trustees; E. R. Brown, president; B. H. Stephens, vice president and general counsel; W. C. Proctor, vice president and treasurer; E. E. Plumley, vice president and manager refineries; F. V. Faulkner, vice president and manager production; A. C. Ebie, vice president and manager sales; D. C. Stewart, vice president and manager pipe lines; Courtenay Marshall, secretary and assistant treasurer; A. S. Hardwicke, assistant general counsel; E. D. Smith, J. V. Farnsworth and W. L. Neill, assistant secretaries; R. J. Blackburn, W. E. Elliott, W. L. Holmes, L. S. Sinclair, G. A. Young, Jr., Roland Martin, D. A. Little and E. N. Johnson, and W. H. Marchbanks, assistant treasurers and W. H. Johnson, assistant treasurer and cashier.

JOHN WARWICK DIES

CHATHAM, Ont., March 20. — Word was received recently of the death at London, Ont., of John Warwick, formerly well known in the Oil Springs Field. Mr. Warwick was 73 years of age, and came to Oil Springs 30 years ago to engage in the oil business.



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LOWE-JONES OIL GAS PROCESS DESCRIBED

(Continued from Page 66)

ments A and B of the primary generator flow downwardly therethrough and upwardly through compartment C of the secondary generator, escaping through the gas off-take extending from this generator into the washer and simultaneously the gases produced in compartments E and D of the secondary generator pass downwardly therethrough escaping through the same gas off-take.

Two Advantages

Through this mode of operation it is possible to (1) heat the gas generating apparatus to the best advantage and in the manner desired and thereafter (2) take advantage of the heats in the production of water gas and oil gas with the greatest degree of efficiency and economy in addition to which, through the highly developed and scientific process as explained, the life of the checker brick in both the primary and secondary generators is greatly prolonged, i.e., it is necessary to renew these checker brick only once in from three to four years.

The gas made in the primary and secondary generators is intermixed with tar and lampblack, the former of which is completely thrown down in the washer from which it escapes through suitable overflows and thence to lampblack separators which, in large gas plants are preferably of the automatic type and in smaller ones of what is known as the "filtering bottom" type. The tar produced is separated in the scrubber from which it escapes through suitable pipe connections and is recovered and mixed with the lampblack, this mixture being thereafter used for firing boilers in the production of steam for all necessary gas making operations.

To those somewhat familiar with the manufacture of modern oil gas the above description will be sufficiently comprehensive to show this type of gas making apparatus, but for the information of those unfamiliar with the production of oil gas, the company says it may be well to state that in the older method very much more oil is required, with the production of much larger quantities of lampblack, than by the use of the improved process, in which latter there is a saving of from 1½ to 2½ gallons of oil per thousand feet in the production of gas of a given quality, and the lampblack produced, only about 12 pounds per thousand feet, is just nicely sufficient for the generation of steam for gas making purposes, whereas, in the older method the very large production of lampblack, usually from 25 to 30 pounds per thousand feet, being much in excess of that needed for steam requirements, creates an inconvenient surplus for which an outside market must be found if possible.

Improved Oil Gas Apparatus is regularly made in eight standard sizes, larger and smaller sizes being designated as specials, and when operated at full daily (24 hour capacity in the production of gas having an average heating value of 550 B.t.u. per foot, the total oil required, including the necessary fuel for the generation of steam, per each 1,000 feet of gas produced will be approximately as follows:

Set Number	Daily Cap. Feet	Ttl. Oil per M. Gallons
1	250,000	2.2
2	500,000	8.0
3	750,000	7.7
4	1,000,000	7.5
5	2,000,000	7.0
6	3,000,000	7.0
7	4,000,000	7.0
8	5,000,000	7.0

If gas of either higher or lower heating content be desired then either add or subtract 0.15 gallons of oil per each 10 B.t.u. over or under 550.

If the apparatus be not operated at capacity, by which is meant that if the daily gas requirements are made in less than 24 hours, there will then be required a small additional amount of oil per each 1,000 feet to restore the heats lost through radiation during the shut-down period and which will, of course, depend upon the length thereof.

The above gas making rating, the company says, is quite conservative, it having been found in practice that overloads running to as high as 40 per cent can be safely carried over a reasonable length of time without injury to the apparatus.

Typical Analyses

Typical analyses of oil gases of different qualities as made by this improved process are as follows:

	Per Cent				
Carbon dioxide	2.5	3.1	3.7	4.4	5.1
Heavy hydrocarbons	2.5	3.1	3.8	4.4	4.3
Oxygen	.5	.4	.4	.3	.3
Carbon monoxide	15.5	14.6	13.4	12.4	11.3
Hydrogen	54.2	51.6	49.1	46.5	44.0
Methane	22.3	24.7	27.2	29.7	32.3
Residual nitrogen	2.6	2.5	2.4	2.3	2.1
Total, per cent.	100.0	100.0	100.0	100.0	100.0
British thermal units	500.7	526.3	553.7	578.0	603.4
Specific grav.	.404	.419	.435	.453	.469

From the above it will be seen that one of the outstanding physical advantages of the gas produced by this method is its low specific gravity, compared with illuminating water gas, natural, and certain other gases, which means that at a given temperature and pressure much more of this gas can be transmitted through existing street mains than can the heavier gases, the effect being to materially increase the carrying capacity of existing street mains without increasing the pressure thereon.

Any grade of oil is entirely suitable for use in this improved process, from the lightest oils commonly known as distillates, to and including the very heavy fuel oils, sometimes as low as 12 degrees B., which latter class of oils are used for firing steam boilers and since oil is the only fuel oil used in the production of gas, there being no solid fuels to handle, the cost of labor is reduced to the absolute minimum as is also the cost of maintenance due to the infrequency of renewals of checker brick and other slight repairs.

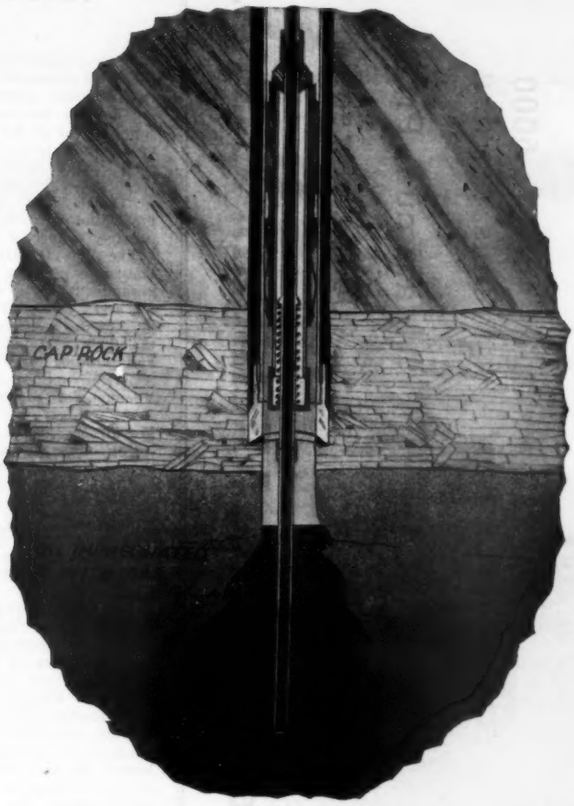
SYNCHRONOUS MOTOR FOR SMALL COMPRESSOR UNITS

The splendid results that have attended the application of the direct connected, synchronous motor to air compressors of the larger capacities, have stirred motor manufacturers to unusual activity in developing synchronous motors suitable for driving compressors of smaller size.

In order to overcome the disadvantages of the present general construction there has been designed a line of synchronous motors known as the "fly-wheel type" which are especially adapted to single straight line air compressor operation. This motor is designed with the rotating element outside the stator. The stator is mounted in a cradle support bolted to the compressor frames. This cradle support is bored concentric with the compressor bearing to assure perfect alignment of the stator and a uniform air gap when assembled. The rotor presents the appearance of an ordinary flywheel. Its face is crowned for driving an exciter or other auxiliary while on the inner surface of the rim are mounted the poles, adding fly-wheel effect, of which there is an abundance.

As a result of the new design, the weight and the cost of the motor have been greatly reduced; sufficient fly-wheel effect for steady, smooth operation has been obtained; a uniform, correct air gap has been secured; foundation expense has been reduced; and because of the simplicity of construction and the machined assembly parts, erection costs and repairs are reduced to a minimum. The floor space required to accommodate a machine so equipped is even less than if belted to a line shaft, and at least 30 to 75 per cent less than required for short belt motor drive, while the cost of the two types of electric drive are practically the same.

Direct connected compressor units with this type motor are now available in sizes ranging from 139 to 1,000 cubic feet displacement, for 100 pounds discharge pressure up to 125 pounds. They are manufactured by the Chicago Pneumatic Tool Co., of New York.



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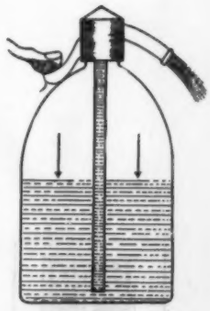

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SUPPLYING OIL FOR THE FLIGHT AROUND THE WORLD SPLENDID FEAT

By L. M. Fanning

While aviation gasoline for the round-the-world planes was purchased from several different American companies having foreign stations and supplies, the supplying of oil for the planes was given over entirely to the Vacuum Oil Co. From the time of early preparation for the flight up to the day the planes got back to Seattle after their globe encircling flight, the Vacuum organization was intimately connected with the whole affair.

The War Department, after its path-finding expedition had been over the ground preparing for the flight, studying every character of condition in every part of the world related in any way to the flight, arranging for supply depots and landing fields, etc., advised the American oil companies, including the Vacuum, of the proposed project and asked what they could do in the way of providing supplies of gasoline and lubricating oils. One of the letters received by the Vacuum Oil Co. stated:

"It is realized that this is a tremendous undertaking. The importance of prompt delivery of these supplies cannot be overestimated. This preliminary letter is being written to you on the assumption that you are in a position to handle world business."

Immediately upon receipt of the letter, officials of the Vacuum pored over the map which accompanied it showing the proposed route of the flight, and, in effect, found they could pronounce all such names as Chignik, Kagoshima, Allahabad, Reykjayiki and Ivigtut, later to become household playthings no longer confined to the crossword puzzle checkerboard. In fact, checking over the world route, in terms of the company's world ramifications, they were little less surprised themselves at the blanketing scope revealed. They found that at 75 per cent of the stops indicated on the map, the company had either warehouses or branch officees and at all other points indicated where man turned a wheel, they had distribution connections. Of course, sparsely settled districts of Alaska, the northern Japanese Islands and Iceland and Greenland, were not touched, but delivery from nearby points to naval vessels carrying the Government supplies, took care of these points.

Matched the Map

The company, therefore, notified the War Department of its ability to handle lubricating oil supplies for the flight, matching the Government's map with one of its own showing warehouses and distribution points throughout the course of the flight. Officials got in touch with foreign branches, companies and marketers by letter and cable to determine the actual availability of the grade of oil especially adapted and recommended for the Liberty Arco engine and found that this was on hand at a majority of the stations outlined in the proposed route. The company then gave the Government the only 100 per cent proposal received, covering delivery at every point specified. Twelve thousand gallons in sealed containers of 5 gallons each, or the nearest equivalent of the country in which the oil was to be delivered, was offered to the Army at the delivery points required, within the time specified. This bid was accepted.

In correspondence with company representatives in different parts of the world considerable information of great value to the Army was obtained. The company assisted in getting information as to sources of supply of aviation gasoline. In some cases analysis were obtained and submitted. Information was furnished regarding the most northern points that were commercially inaccessible, and some changes were made accordingly in supply stations. Typical of the character of reports received by the company officials from their foreign connections relating to delivery in out of the way places, also revealing the severe conditions to which the fliers and the planes were subjected, is the following from the Vacuum Oil Co., A. S., of Copenhagen:

"As to delivery of 200 gallons of Gargoyle Mobiloil B to Hornafjord (Iceland), we beg to inform you there is no regular connection with Hornafjord. There is living at that place only one merchant, Mr. Th. Danielsson; he is taking goods he needs to Faskrudsfjord, a place about 100 miles to the north of Hornafjord, and is then, himself, arranging to transport from Faskrudsfjord."

At Every Stop

There was a representative of the Vacuum Oil Co. at every stop of the fliers in the inhabited regions, and the files of the company are jammed with interesting accounts of the reception tendered the fliers by these representatives at isolated landings. Lieut. G. O. Noville, a Vacuum engineer and formerly a Navy flier, was attached to the flight by the company at the start along the Pacific Coast and also upon the return of the fliers to this continent.

As the world flight progressed the importance of assured deliveries of oil took on the complexion of a serious business subjected to the scrutiny of every eye that could read a newspaper in any print or script and to the sensitive eardrum of the world pressed into the radio receiver. At no point was there failure to have on hand fuel and oil—no delays were occasioned from this standpoint. In many instances the stories of getting these supplies at their proper points are individual gems of human interest, but probably the most outstanding feat was that of the rescue of 18 drums of oil in a 60-mile gale by Lieutenant Noville and two seamen at Indian Harbor, Labrador.

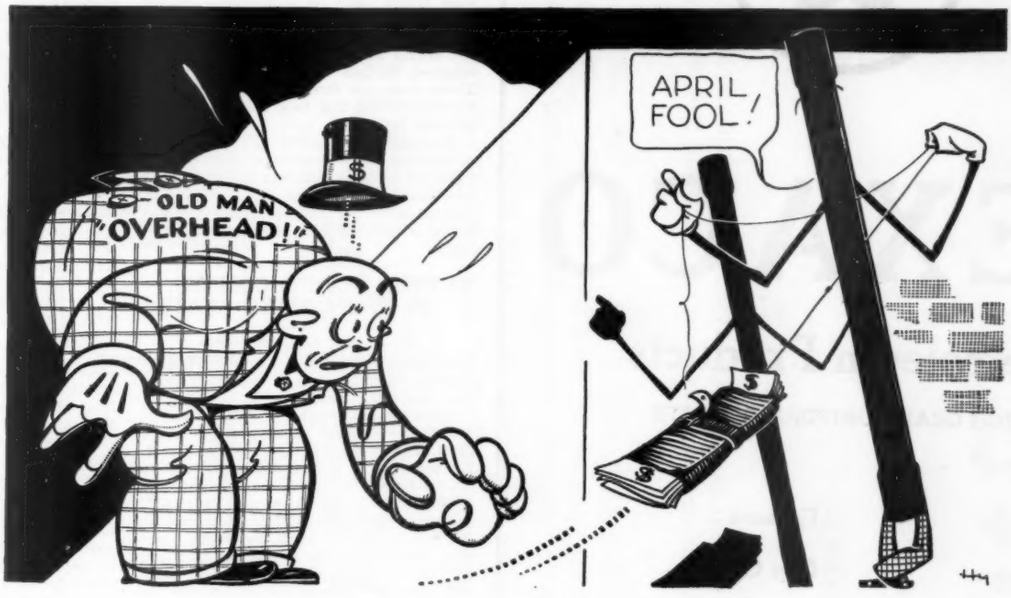
During a storm Lieutenant Noville's camp was inundated, and 18 drums of fuel, each weighing 450 pounds, floated away and were pounding against the rocks. The lieutenant and Seamen Joseph Bowl and William Cahill from the destroyer Lawrence, first sought to recapture them in the Lawrence's short boat, but this capsized. They then leaped into the freezing waters and battled with the seas and wind from 7 o'clock in the evening until midnight, lashed the drums together and dragged them to the beach. They sat up the rest of the night watching the fuel and rubbing each other with alcohol. Their plight was discovered the next day by the destroyer Richmond, which sent food, dry clothing and a tent to them. Their 72-hour virgil was unrelieved by fire or dry food. Had the drums escaped the fliers would have reached Indian Harbor without supplies, the nearest fuel being at Hawkes Bay, Newfoundland. This would have postponed the flight indefinitely. Lieutenant Noville has received a citation from the Navy Department for his work at Indian Harbor and a letter of commendation from General Patrick of the Army Air Service.

Some idea of the tedious and difficult work of establishing supplies at remote places is given in a description of the landing of the world planes at Ice Tickle, Labrador. Mooring bouys were in position and supplies of gasoline and oil were there. The bouys were marked by yellow pennants and were visible from the air. Near by an indicator showed the direction of the wind. After circling in the air to determine their position, the planes landed on the water and headed into the wind as they taxied to their moorings.

Supplies Unfailing

All these plans had been prepared months ago, but it had taken time and trouble to execute them. Originally it had been proposed to have the landing at Riggolette, a Hudson Bay trading post 50 miles farther down from Hamilton Inlet. That was the preceding spring when Hamilton Inlet was frozen over the only means of transportation was the komatick, or Eskimo dog sled.

Sleds were engaged to take the supplies to Rigolette but practical difficul-



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Motor Oils	Waxes
Engine Oils	Asphalts
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ties brought about a change in the plans and Rigolette was abandoned as a base and Indian Harbor, at the mouth of the inlet, was selected instead. Then when the ice broke up and drifted out to sea, and the first of the Government supply steamers came in with provisions for the settlements along the coast, the drums of gasoline and oil were landed. They were left in the snow at Pomeroy Island and were found there by Lieutenant Noville when he arrived at the end of July to take charge. Although left unguarded the drums had been untouched and were removed to Ice Tickle, 4 miles away. These were the drums recovered by the lieutenant and the two seamen at risk of their lives.

Semiofficial estimates of the amount of gasoline and oil consumed in the world flight show approximately 23 gallons of gasoline per hour per plane and two gallons of oil per hour per plane. Total flying hours were 375 hours and 11 minutes.

BETTER FLYING COMING IN THE UNITED STATES

(Continued from Page 65)

age charge per pound per mile for freight and per passenger mile for intercity flying was somewhat higher.

Some of these figures of interest to the petroleum industry might be cited. In 1923, 124 fixed base operators reported, compared with 129 in 1922 and 125 in 1921. Some 600 planes were operated in 1923. Total miles flown were 3,014,611, compared with 2,846,037 in 1922 and 2,907,245 in 1921; total passengers carried, 80,888 against 75,268 in 1922 and 122,512 in 1921; freight carried, 208,302 pounds, against 110,663 pounds in 1922 and 123,221 pounds in 1921. The average charge per short flight was $5.50 against $7 and $9; charge per pound per mile for freight, $0.104, against $0.036 and $0.35; charge per mile per intercity flight, $0.46, against $0.428 and $0.55. Analysis of the figures indicates that fixed base operators are getting down to business management. Fixed base flying is now being done in 33 States.

There have now been established regular air marine lines in Florida and Caribbean waters and on the Great Lakes, and overland lines, some regular and others on specification, in virtually all parts of the United States and Canada. The greatest proportion of the flying, it is noted, is from city to pleasure resorts or between different resorts, but analysis of the character of passenger flying brings out the fact that most of it is in relation to business.

One of the spectacular new uses made of the airplane is that of skywriting, these planes having demonstrated over 300 of the principal cities in 1923 and flown a distance of 263,000 miles.

Airplane Use Varied

The use the airplane is being put to is varied and of essential character. One of the greatest developments has been that of the United States Air Mail, which is treated elsewhere. Collaborating with the Army Air Service, the Department of Agriculture has made impressive progress in the utilization of aircraft. The cotton boll weevil and leaf worm in Texas, the gypsy moth in New England and the locust in the Philippine Islands are being successfully attacked from the air. Aircraft at the same time give promise of extending the scope of the crop estimator and making his reports more accurate.

To aid in detecting forest fires, aircraft use if of inestimable value in guarding this country's $6,000,000,000 resource of an area of some 500,000,000 acres. The Department of Commerce has had difficulty in getting the necessary funds to develop an adequate Forest Air Patrol, and at times has had to suspend the service only to resume it out of sheer necessity.

In 1922 the total area observed was about 2,153,370 square miles; total number of miles flown, 36,121 and the actual flying time 361 hours and 50 minutes. Two hundred and ninety-four patrols were flown. Of the 458 fires discovered, approximately 114 were discovered first by airplane. Fires were located with the average accuracy of 95 per cent. The airplane provides an unparalleled means for the discovery of fire, according to Forest Service chiefs. Private timber associations are using airplanes.

The United States Geological Survey in cooperation with the Army Air Service used the airplane extensively in making topographical maps for the use of science, commerce and industry. The United States Bureau of Mines is using aircraft to get its rescue men to the scenes of mine disaster. An interesting development in the use of airplanes in shipping funds to banks in case of runs, etc. Aircraft are the bane of the rum-runners' existence. Seaplanes are being used by livesaving patrols.

A stimulant to aircraft use is the development of aerial photography. There are now three important corporations specializing in this work among others, the Eastman Kodak Co., Fairchild Aerial Camera Corp. and Hamilton-Maxwell, Inc. They have provided scores of small commercial airplane operators with the means by which a continuous profitable use may be made of their aircraft. Aerial photography is performing its own sales extension in a remarkable manner. Pictures, maps and surveys from the air are in demand in excess of the ability to supply.

Of the six requisites for safe flying, according to the Aeronautical Chamber of Commerce, three concern the inspection and certification of craft, engines and pilots, and three involve the establishment of terminals, the laying out of air routes and the nation-wide availability of meteorological information. These are the important things to be considered in connection with the future of aviation.

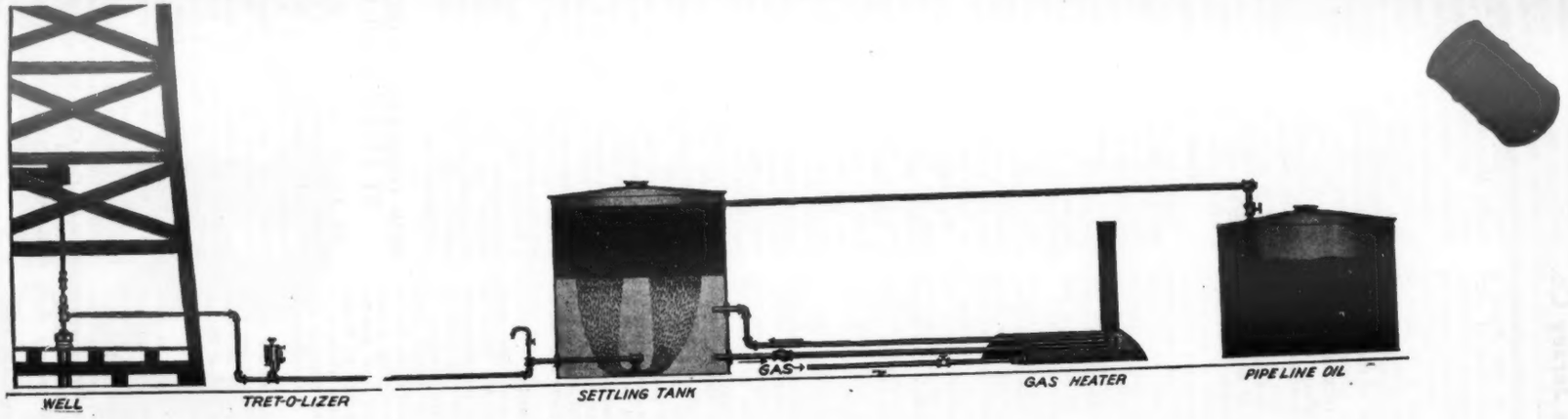
While satisfactory realization of all these factors must necessarily await the formulation of a national air policy and its expression through the establishment of a Bureau of Aeronautics of similar agency, much is being done in the meantime by the Air Service, the Air Mail, the Bureau of Aeronautics and by civilian flyers. The airways section, Office of Chief of Air Service, has rendered a valuable service in charting a considerable number of routes, in publishing flying maps and issuing data covering landing fields and airways. This and other developments mentioned point to the sure establishment of air travel in this country on a basis comparable first to rail travel in extent, but potentially one paralleling and rivaling the automobile.

OKLAHOMA'S GAS LINES NOW OVER 2,275 MILES

The Oklahoma Utilities Association has just completed a map showing location of natural gas supply lines and local gas distribution plants in Oklahoma. A compilation made by this association from this map shows that there are 2,275 miles of gas lines in the State, not including hundreds of miles of pipe used for distribution of gas in cities and towns.

Companies having the largest supply pipe line mileage are the Oklahoma Natural Gas Co. with approximately 800 miles, and the Empire Natural Gas Co. with about 500 miles. While these companies are engaged chiefly in the transmission of natural gas for sale at town border, they also own directly or through allied companies scores of local distribution plants. The Empire Natural Gas Co., which also owns hundreds of miles of pipe line in Kansas and Missouri, make a connection with the Oklahoma Natural Gas Co.'s lines near the center of the State and the latter company connects with lines of the Lone Star Gas Co., a large gas tranmission concern of Texas.

About 35 small companies are engaged in transmission of natural gas, chiefly to local distribution plants owned by themselves or allied companies. In addition to thousands of miles of gas pipe lines more than a dozen large compressor stations are necessary to carry gas to cities and towns of Oklahoma that are favored with this fuel.



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The cut oil separates completely into pipe line oil and water, in the settling tank, and pipe line oil flows off from top of settling tank to storage tank.

This plant operates continuously, and can handle as high as 20,000 barrels of emulsion per day. One gallon of TRET-O-LITE will treat 100 to 200 barrels of emulsion.

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Vice President Hunt Reports Operations Of New Jersey Co.

NEW YORK, March 23.—Profits of the Standard Oil Co. of New Jersey in 1924 were larger than those of 1923, when balance for the common of $40,297,179 was equal to $2.10 a share, according to summary of the year's operations made by Vice President S. B. Hunt at the annual conference of company officials.

Marketing operations of the company, Mr. Hunt said, were the largest on record and exceeded those of 1923, the previous record year, by about 25 per cent in the aggregate in domestic and foreign markets. This, despite the fact that 1924, according to Mr. Hunt, was one of the keenest competition in all markets.

"In the face of severe price-cutting during the last six months of the year," Mr. Hunt stated, "we increased our sales, domestic and foreign, for the year about 25 per cent over the year 1923, which previously stood as the greatest year as to volume in our history."

This sales record was a real gain, when it is considered that in 1923 New Jersey's domestic sales gained 30 per cent and foreign sales 26 per cent over 1922.

Production of the various companies in which Standard Oil of New Jersey is interested amounted to 178,000 bbls. daily for 1924, compared with 192,000 bbls. daily in 1923. Half of this difference in production between the two years, he says, was due to falling off in production in Mexico last spring, before New Jersey had developed production in its Cacalilao leases in Panuco, and the balance mostly because in 1923 it had large flush production at Burbank, Okla., and Powell, Tex.

"It is probable," he said, "that for the year 1925 we will maintain a production equal to 1924, and we shall, of course, try to increase it." He pointed out that the company's production in both 1923 and 1924 was larger than that of the entire United States in 1900.

Referring to the outlook on crude oil, after noting increases in storage in the past three and one-half years, he said: "There was a change in the picture the last six months of 1924 and about 10,000,000 bbls. were actually taken from storage * * * and the prospect for 1925 is that the country will draw on the stocks of crude and products and not accumulate."

Foreign Production

Discussing work in producing crude oil in foreign countries, Mr. Hunt remarks, as presented in the company's magazine The Lamp, that this work requires much time and investment.

Work in Dutch East Indies, after many years of large expenditures, has resulted this year in developing a commercial production which has justified laying 80 miles of pipe line to Palembang on Island of Sumatra where a refinery is being built. The company also has a small production and refinery in Java.

Problem in Rumania, he said, is to secure a fair opportunity to develop business. The company is active in Poland and recently completed a well at Bitkow which leads to the hope of getting production there in time.

"In Mexico," he said, "where we were late in going into the country compared with our competitors, we have achieved during the past two years a real success and look for a satisfactory year in 1925. We have a pipe line system handling about 100,000 bbls. a day of heavy crude, two-thirds of which we produce ourselves."

Regarding Peru, he said the International Petroleum's fine property gave a splendid account of itself in 1924 and is now producing about 20,000 bbls. daily of crude yielding high percentages of the best quality gasoline and lubricating oils.

South America

He then told of the laying of the 400-mile pipe line in Colombia by International Petroleum. In Venezuela, he said, New Jersey had acquired important areas now being tested, that Venezuela is an oil country but there was nothing definite to report. Work in the Comodoro Rivadavia Field of Argentina brought no results and operations in that part of the country have been curtailed.

Better results have been obtained in prospecting work in Bolivia. Development of land on the eastern flank of the Andes Mountains has been undertaken and a well completed recently which promises commercial production.

Discussing expansion of Standard Oil of New Jersey since the dissolution in 1911, Mr. Hunt pointed out that when the dissolution decree became effective the company and its subsidiaries had been running about 250,000 bbls. of crude oil daily.

"A striking fact is that in the year 1924 the various plants in which the company is interested through direct ownership ran 374,000 bbls. a day, an increase of 29 per cent over 1923. There were 33 different grades of crude handled."

Tanker Fleet Expansion

Regarding the record volume of sales here and abroad last year, aggregating 25 per cent over the previous record volume in 1923, he said the company has continued to incease sales of bunker fuel oil, particularly in North Atlantic ports. Shipments of company's own brand of lubricating oils gained 20 per cent over the previous year. In the domestic trade a large sum was spent to increase substantially equipment of bulk and service stations, motor trucks and other marketing facilities.

Regarding New Jersey's tank steamer fleet, Mr. Hunt stated that at the dissolution in 1911 the company had no American fleet. The John D. Archbold, built in 1914, was the first company tanker flying the American flag. In 10 years the fleet has been built to a total of 37 tankers with an aggregate of 450,000 dead weight tons under American registry; foreign subsidiaries have 37 tankers with 325,000 dead weight tons. This brings the total fleet to 750,000 tons representing 10 per cent of the world's tanker tonnage. Including ships under charter, New Jersey is operating one-seventh of the tankers employed in the world.

"Recently," said Mr. Hunt, "we have disposed of some of the older American tankers, as they had become obsolete. We have under construction, in foreign yards, 12 Diesel motor tankers which can be operated at 25 per cent lower cost."

The company's fleet traveled nearly 3,500,000 miles and moved about 59,000,000 bbls. of oil during 1924.

Natural gas subsidiaries, since starting business, have produced 1,830,000,000,000 cubic feet of gas and purchased 520,000,000,000 cubic feet from other producers, making total sales to the public 2,350,000,000,000 cubic feet.

NEW OFFICERS CHOSEN BY ST. LOUIS OIL CLUB

ST. LOUIS, Mo., March 20.—Paul Browne of the Independent Oil Co., has been elected president of the St. Louis Petroleum club following its inaugural banquet and ball. Other officers are: Charles Osthoff, Jr., Liberty Bell Oil Co., vice president; R. F. Leinberger, Blackmer Rotary Pump Co., secretary; W. Kleissle, J. D. Streett & Co., treasurer, and H. Billings, St. Louis Tin & Sheet Metal Works, sergeant-at-arms.

New members of the governing board are: A. R. Chappell of the R. J. Brown Petroleum Co.; Art Burns, Roxana Petroleum Corp.; Ed Adams, George P. Jones Oil Co.; C. A. Beach, Empire Refineries; H. W. Strecker, Modern Oil & Supply Co.; A. F. Cunningham, National Enameling & Stamping Co.

BUYS REFINING PLANT

LONG BEACH, Cal., March 21.—Through the purchase of stock in the Continental Petroleum Corp. of San Francisco, the Marine Oil Corp., a producing firm, has added refining facilities to its holdings. The Continental corporation has a large refinery at Los Angeles. Marine has a daily production of 15,000 bbls. at Signal Hill and Rosecrans.

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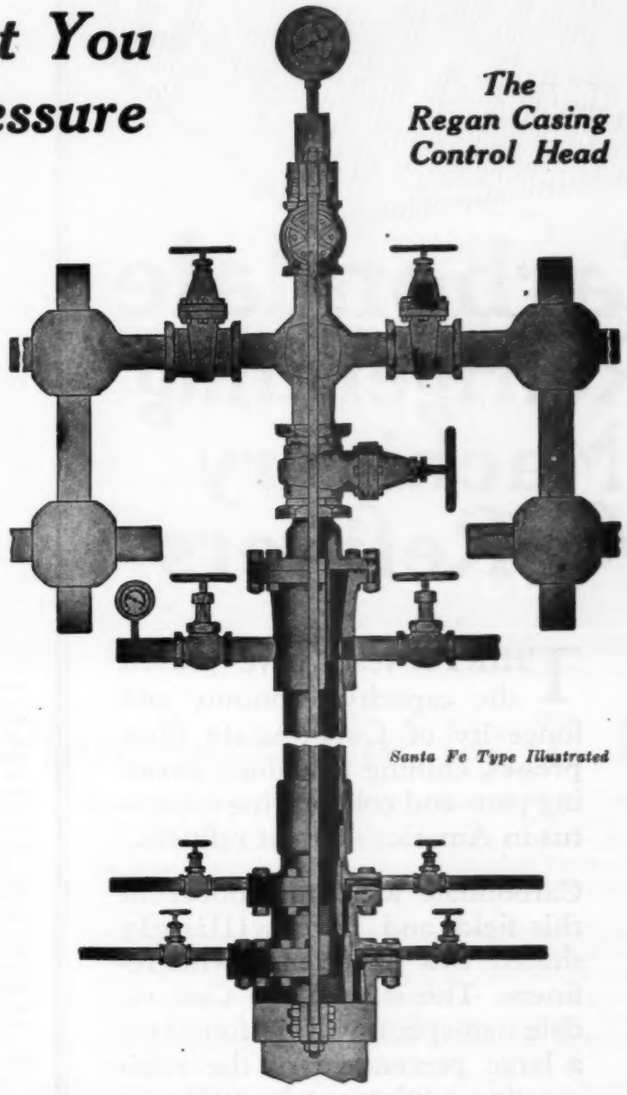

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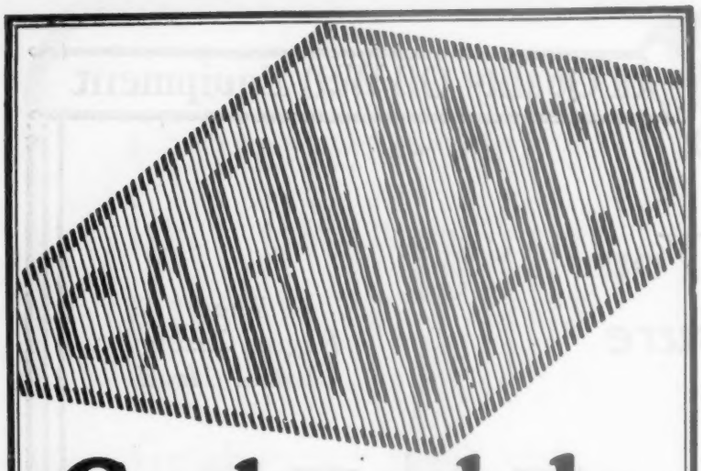

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COOPERATION IN FOREIGN FIELDS AN AID TO CONSERVATION OF OIL

By L. M. Fanning

Expansion of American operations in foreign fields, being recognized as an important factor in the retention of our foremost position in petroleum development and in the conservation of domestic oil resources, can be accomplished not alone by the initiative of single companies with large capital.

Much has been done by such companies as the Standard Oil Co. (New Jersey) in attempting, sometimes successfully, to get a share of prospective petroleum territory for development in outside countries, but a careful study of the activity of certain of the foreign combinations, especially the Royal Dutch-Shell and Anglo-Persian Oil Co., shows that the latter are making much greater headway than can individual American companies no matter how active the latter may be.

This raises the question of American companies combining in the development of foreign fields.

It is not generally known that an American group for such development does exist. It has existed for some time. The fundamental idea behind its formation was the conservation of American reserves and it is not unlikely that this phase combination in foreign development will receive considerable attention by the Federal Oil Conservation Commission.

Mr. Hoover's Initiative

Secretary Hoover of the Department of Commerce and a member of the Oil Conservation Board, was directly responsible for the organization of the American group. In this connection it may be well to mention that Secretary Hoover has given a great amount of attention to petroleum problems, both as regards the position of American companies in foreign development and as respects the stabilization of the industry at home. While he is not credited with the sponsorship of the idea of a Federal oil board and, so far as is known, had nothing to do with that particular development. Mr. Hoover as a member of the board, will be found to be peculiarly well informed on all phases of petroleum problems.

Something of the history and the possibilities of the present or other groups of American oil companies which can effect a a concentration of capital and expect the backing of the Government in some way comparable to the financial and political resources of the great foreign combines, is certain to be developed as an important phase of the question of conservation.

Since the time of the formation of the American group, conditions have somewhat changed. Following the war the world struggle for oil developed a definite closed door policy on the part of Great Britain and other foreign countries striving to gain for themselves and exclude other countries from large present and potential oil reserves. This policy was protested by the American Government on frequent occasions; the matter of actual resources of oil in this country was causing some alarm, and the necessity of protecting the nation was strongly felt by both Secretary of State Hughes and Secretary of Commerce Hoover.

In 1921 Mr. Hoover called a meeting of American oil producers at Washington. It is understood that he felt strongly that the most effective means of bringing about conservation of fields at home was the extension of American activities abroad. American oil companies had asked the Government for aid in expanding their operations and it is possible that Mr. Hoover called upon the companies represented at this conference to show their good faith by specifying where they would operate if they could do so on terms of equality with other nations. As a result of his efforts, the formation of an American group was accomplished.

The representations of the United States State Department caused Great Britain to take a more conciliatory attitude as regards the closed door. It forsook the policy of exclusion for one of partial inclusion.

One of the particular causes of complaint on the part of the American Government was the Mesopotamian question. The Turkish Petroleum Co., a British company, just prior to the outbreak of the World War, secured certain rights or leases to petroleum deposits in the vilayets of Mosul and Bagdad, from the Turkish Government. The interests in the company were 50 per cent Anglo-Persian Oil Co., 25 per cent Royal Dutch-Shell and 25 per cent Deutsche Bank. The war broke out as these contracts were being worked out.

Under the San Remo agreement following the war the 25 per cent interest formerly held by the Deutsche Bank was given to the French. The San Remo agreement brought a long series of protests on the part of our State Department against the closed door policy and disclaimers from the British Government.

The strong representations by the United States, however, brought about a change of policy on the part of Great Britain. This was first developed through the offering of a share to Americans in the Turkish Petroleum Co. Specifically, a half interest in the Anglo-Persian Oil Co.'s share of the company was offered to the American group just formed as a result of Secretary Hoover's conference.

The negotiations were conducted on behalf of the American group by Walter C. Teagle, president of the Standard Oil Co. (New Jersey). A plan of cooperation was worked out which gave the American group its quarter interest.

Since the completion of the negotiations nothing has developed, other than steps to bring about a determination of the legality or recognition of the Turkish Petroleum Co.'s claims, and whether the American group will ever actually function as such in the particular case of this concession remains to be seen.

Aid to Conservation

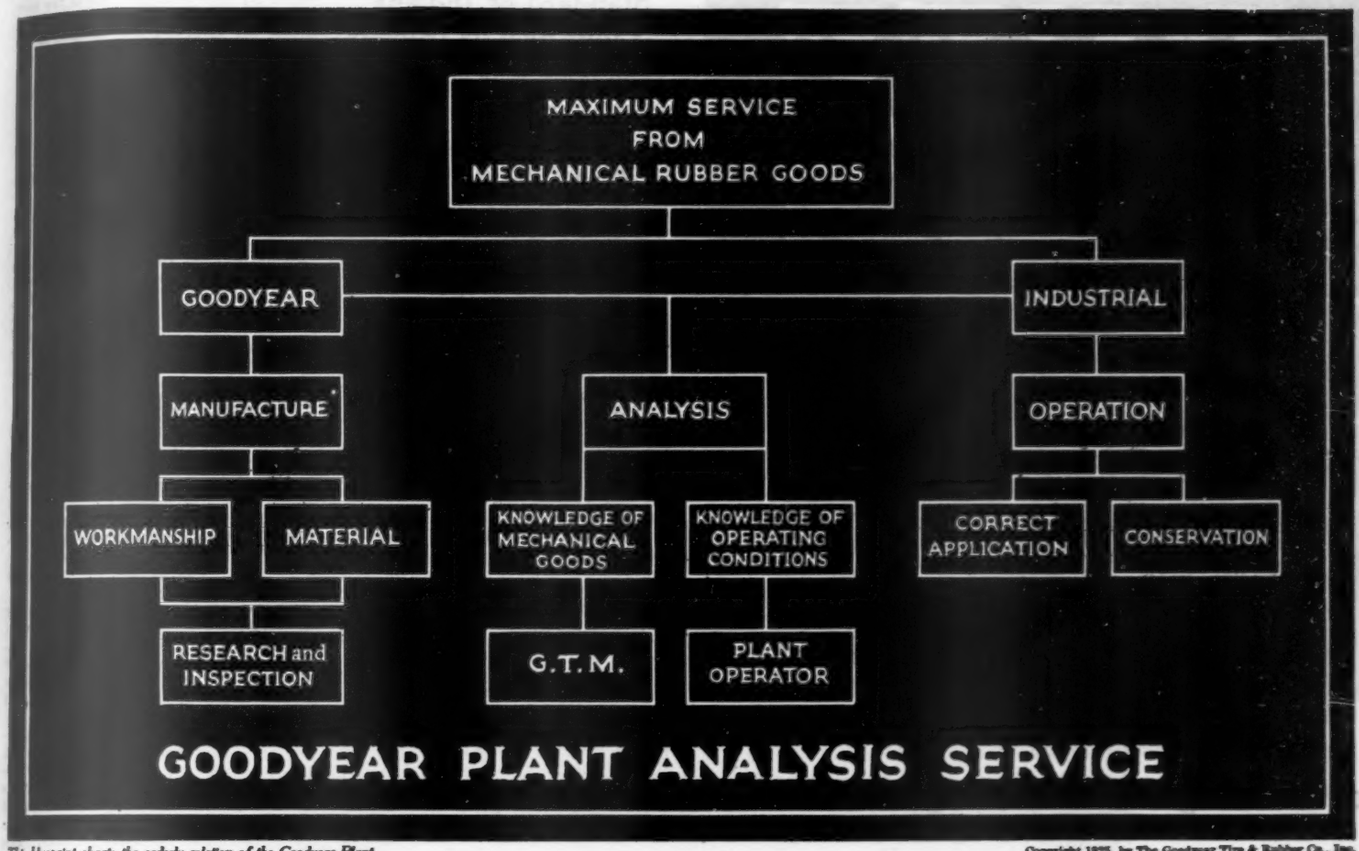
The important point is that such a group has been formed; involving some recognition on the part of the oil industry and certainly approval on the part of the Government of this method of solving one of the phases of conservation of American oil. It is understood that the group comprised five companies, all identified with foreign producing operations and including Standard Oil and independents.

It is true the acute situation of exclusion that existed immediately following the war does not exist now. The Anglo-Persian Oil Co. and the Standard Oil Co. (New Jersey) have joined in concessions in the northern provinces of Persia, further bringing out the change of policy on the part of great Britain. Full appreciation of this is not possible without knowledge that the British Government owns 60 per cent of the stock of the Anglo-Persian Oil Co.

Under the circumstances, American oil companies active in foreign operations are probably not so keen now as they might have been three or four years ago in joining together for foreign exploitation. In fact, there is some doubt as to whether the companies ever were particularly keen about the idea. Nevertheless, if the latter is taken with some credence, it also brings out that Government pressure can bring about such things, the advantage of which can only be determined under actual functioning.

If it can be brought out that there is something to be gained by cooperation of American companies in foreign producing work of direct benefit to the solution of this country's problem of conservation, such cooperative enterprise might be one of the most easily effected and painless methods that could be devised.

(Continued on Page 136)



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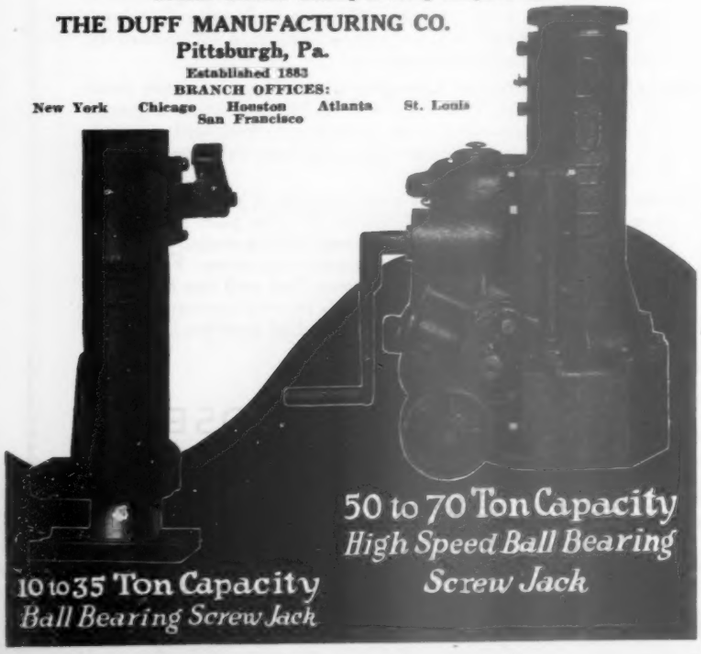

Negotiations With Standard of Indiana Confirmed by Doheny

NEW YORK, March 21.—The negotiations under way for segregation of the Mexican from the American properties of the Pan American Petroleum and Transport Co. and the entrance of new interests into the organization are likely to be completed "within less than a month," Edward L. Doheny, chairman of the board, announced.

"It is true," said a statement issued by the company, "that negotiations are underway in connection with a plan which is in the nature of a reorganization, and which, if carried out, will result in the Mexican properties of the Pan American Petroleum & Transport Co. and the California properties of that company being segregated, so that each will be operated by a separate corporate organization. If this plan is carried out it is probable that new interests will come into the Pan-American organization, but the California properties will continue to be operated by a corporation organized by Pan American interests."

It is the intention to form two organizations to be known as the Pan American Western Petroleum Co. and the Pan American Eastern Co. The Western company will operate the California properties. "There may be changes in the personnel of the two companies," the statement adds, "but Mr. Doheny will always remain interested and active in Pan American affairs and will give special attention to the California end of the business."

The eastern company will operate the properties of the Mexican Petroleum Co., also the properties in Venezuela, the tanker fleet and pipe lines and other properties in the East.

The chief interest which Blair & Co., Inc., who are negotiating the deal, represent is the Standard Oil Co. of Indiana.

Mr. Doheny said there would be no direct change in the ownership of the properties, but he would sell control of the Pan American organization. He would continue to hold a substantial interest, however.

Asked what his present interest amounted to, he replied it was about $50,000,000. Compensation for his interest, he said, would be in the form of "some cash."

It was said control of the Pan American Eastern Co. would be retained by American interests. It is planned to take into that company the properties of the British-Mexican Petroleum Co., which were sold by Pan American to British interests 16 months ago.

The statement by Pan American said that "instead of the amount involved being $125,000,000, as published, the book value of the company's stock was $193,000,000 and the market value $220,000,000, while the yearly production was about 60,000,000 bbls. Gross sales of Pan American in January were $8,581,289 and in February $9,723,908. When Mr. Doheny's attention was called to the fact that the estimate of $125,000,000 regarding value and 25,000,000 bbls. production referred only to the Mexican end of the business, he said even those totals were conservative.

NEW MEXICO'S STATE LAND LEASING RULES

ARTESIA, N. M., March 20.—Following are the main points of the new regulations governing State oil leases in New Mexico issued by E. B. Swope, land commissioner, Santa Fe, which will be effective March 14.

On all lands located in the counties of Chaves, Lea and Eddy an annual rental of less than 15 cents per acre will not be considered.

On any other lands an annual rental of less than 5 cents per acre will not be considered, except as hereinafter provided in the case of development leases.

Oil and gas development leases will be issued at the rate of 1 cent per acre per year on lands aggregating 30,000-acre blocks or less, providing that the lessee shall commence actual drilling operations within 90 days from the date of the lease or, at the option of the commissioner, within six months from the date of the lease. During this period the lessee is not privileged to assign any part of the land held in his lease. If drilling operations are not commenced within the specified time, the lessee will forfeit the money paid as rentals and the lease will be subject to cancellation without notice. The commissioner reserves the right to require the applicant to furnish a sufficient bond to guarantee that drilling operations will be commenced within the time specified.

Applicant must furnish all information under oath as called for on application forms prescribed by the State land office.

Lease forms, and all other forms required in connection with the leasing of State lands and other information will be furnished upon application.

RED RIVER DRILLERS TO BE REIMBURSED

WASHINGTON, D. C., March 21.—The Supreme Court has issued an order approving the expenses incurred by the Kirby Petroleum Co. in drilling well No. 139 in the bed of Red River on land involved in the famous boundary line dispute which was before the courts for years.

The court also directed the receiver to reimburse those who put down wells in the receivership area for actual reasonable costs incurred, irrespective of whether they were put down by right or under erroneous impression of lawful ownership.

Referring to the fact that the receiver holds considerable money for which no claimants have appeared the court directed him to pay to the State of Texas all money obtained from wells adjudged to be in Texas which remains in his hands unclaimed on April 15, next. This will leave such claimants after that date to take up their claims with Texas.

The court directed the receiver to pay to the Secretary of the Interior $1,100,000 more out of funds in his hands derived from wells which the court found to be located upon land belonging to the Government. This will bring the total received by the Government from these lands under receivership to $3,000,000. There will be a further balance on this account to be disbursed at the close of the receivership.

FRICK-REID CO. SELECTS OFFICERS AND DIRECTORS

The stockholders of the Frick-Reid Supply Co. at their annual meeting, held in Pittsburgh, elected the following directors for the ensuing year: W. A. Anderson, C. C. Cooley, W. E. Frick, N. C. Harrison, W. M. Patterson, W. O. Platt, John Reid, J. E. Swindler and A. S. Turner. At the directors meeting the following officers were elected: W. E. Frick, president; W. O. Platt, vice president; J. E. Swindler, vice president; J. L. Shakely, second vice president; U. H. Bower, assistant treasurer, and W. M. Patterson, secretary.

The resignation of M. L. Moore as a director and officer of the company, was presented and accepted as of March 5 effective at once. J. E. Swindler, vice president, is the executive officer at Tulsa, and in charge of all departments of that office, and the branch store and field operations. J. L. Shakely, as second vice president, will be in charge of sales.

MADE CREDIT MANAGER

J. T. Tierney, district credit manager of the Continental Supply Co. at Coffeyville, Kans., has been made Mid-Continent credit manager, and will have charge of the company's credit department in the Mid-Continent, with offices in Tulsa. He is succeeded by E. L. Eppenauer, formerly of the credit department of the Atlas Supply Co. at Muskogee, Okla.

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FOREIGN COOPERATION AIDS OIL CONSERVATION

(Continued from Page 132)

Such combining in foreign development must necessarily conform to the State Department's conception of the open door. This means that other American groups, for instance, would be formed and would acquire rights in foreign countries and have equal Government backing. The establishment of the group in 1921 is a precedent, but the fact that it has not actually functioned in operating makes it possible for this precedent to pass scarcely noticed.

The necessity for strongly backed aggressiveness in the procuring of foreign concessions by American interests is apparent when the activities of such companies as the Anglo-Persian Oil Co. are considered. To cite recent instances, it is reported that the Anglo-Persian has secured a grant for the exploitation of petroleum resources in Albania, the Albanian Parliament refusing the proposals of the Standard Oil, Sinclair companies and the Italian State Railway management. This has been the subject of diplomatic representation by several countries, including Great Britain and Italy, and, it is understood, the American State Department is interested to the extent of seeing that American companies are given equal opportunity and that the open door policy is observed.

The Anglo-Persian Oil Co. is also credited with having been granted a concession in Italy upon which the Sinclair Consolidated Oil Corp. has had an option. These developments show that Britain is still adhering to her definite program of acquirement; that it, to the oil policy decided upon after the close of the World War.

ARMY MAKES MILLION CONTRACT FOR PLANES

WASHINGTON, D. C., March 21.—Contracts totaling more than $1,000,000 for new types of aircraft developed by the Curtiss Co. of New York and the Douglass Co. of California have just been awarded by the Army Air Service.

The machines are new observation types which have been approved by the Army Air Service as replacements for the war built "DH" type. An award of $70,000 was given the Curtiss company for development of the new machine and the Douglass company received an award of $60,000 for similar work on its production.

Awards were made on the basis of tests at McCook Field, Dayton, Ohio. Ten machines were ordered from the Curtiss company at an estimated cost of $250,000 and 75 at an estimated cost of $883,000 from the Douglass company.

McCook Field tests of the Curtiss and Douglass types revealed a speed power in excess of 130 miles an hour and a lifting capacity sufficient to take the craft to altitudes exceeding 20,000 feet.

Ten amphibian observation planes recently ordered are to be used in observation work by the air service along the coasts and in the vicinity of the Great Lakes.

OPEN NEW GAS FIELD

RIDGWAY, Pa., March 21.—C. H. Brennan and H. C. Law, who have been drilling a number of wells on Rattle Snake Run, corner of Elk, Jefferson and Clearfield counties, completed a well making 5,000,000 feet of gas per day. This shows, according to the opinion of men who are interested in the natural gas business, that they have opened up a large field on what is known as the Boone's Mountain Anticlinal. This well and the seven other wells they have completed show shut in over 17,500,000 feet.

OPENS OFFICE AT DALLAS

The American Appraisal Co. has announced the opening of an office in Dallas, Tex., in the Mercantile Bank Bldg., there, with Lloyd B. Jones in charge.

GOOD CHANCE FOR OIL SEEN IN NEW GUINEA

Professor Sir Edgeworth David, the chief resident geological authority in the Commonwealth of Australia, has been telling a Government Committee that, apart from the possibilities of mineral oil in payable quantities in the Roma-Orallo-Blackall districts of Queensland, the smaller possibilities of the Kimberley area of western Australia, and the possibility of natural gas near the Gippsland lakes, by far the greatest possibility of free mineral oil exists in Papua and the Mandated territory of New Guinea. One of his former geological students, E. A. Briggs, M.Sc., of Sydney University, submitted to the professor, on his return from New Guiena all his notes and collections. From Mr. Briggs and his data, and from information received from Evan R. Stanley, the Federal Government geologist, Professor David says he has formed the opinion that there is a strong probability of a large oil field developing somewhere within the 11,000 square miles enclosed between the Sepik River on the south, the coast of New Guiena, extending from the mouth of that river westwards to the Dutch frontier, and the Dutch frontier between the Upper Sepik and the coast. What would most facilitate the development of these oil fields, and guard the public against a useless expenditure in prospecting in unlikely places, would be to strengthen greatly Mr. Stanley's geological staff. The American oil prospecting experience shows that the chances of striking oil by boring are 60 times as good when a careful geological survey has been made as they would be when the bores are put down haphazard. This matter of a strong Federal geological survey for Papua and mandated territory is to my mind most urgent at present. There can be no question that oil of good quality exists both in Papua and mandated territory. Careful geological survey work to determine whether there are suitable structures, and, if found, then boring on such sites, can alone determine whether this good oil is at present there is payable quantities or not."

EUROPE TO AUSTRALIA BY PLANE VIA U. S.

NEW YORK, March 21.—Lord Thomson, Secretary of State for Air in the late British Labor Ministry, predicted an aerial mail and passenger service between England and Australia via the United States within three years.

Lord Thomson, who had already predicted such service between England and India, said the proposed England-Australia air service contemplated flights by British planes across the Atlantic to a field on the eastern seaboard of the United States, where American planes were expected to take up the flight to the Pacific Coast, whence British planes would complete the journey. He said the flight would take from 10 to 14 days.

In 10 years, he added, air travel for passengers across the Atlantic would be the rule, rather than the exception.

SELLS OIL AND GAS WELLS

KNOX, Pa., March 21.—A large oil, gas and gasoline property changed hands recently when J. C. Berlin & Son sold their entire production near Fern to I. C. Hess of the same place. It consists of about 32 oil wells, a few gas wells and a modern gasoline plant. Most of the oil wells are old timers, being drilled in 1886 and 1887, during the Fern City oil boom.

ARKANSAS GAS CHARTERS

The Camden Gas Co. of Camden, Ark., has been incorporated with a capital stock to engage in gas and drilling and production. The incorporators are H. B. Schofield, L. A. Porter and J. S. Connelly. The Natural Gas & Fuel Corp. of Delaware recently was admitted to Arkansas with headquarters at El Dorado. C. E. Ide is president and C. B. Wendum, secretary.

A Yard of Linen is no Longer Than a Yard of Calico But How About the Service?

The Lufkin-Taylor Make *and* Break Rotary

FACT NO. 3—MAKE AND BREAK ROTARIES

A prominent oil man recently paid us a fine compliment by stating the Lufkin-Taylor Rotary was three to five years ahead of the game and his only objection was the higher price—that "cheaper" make and break Rotaries were doing the work; at least no complaints from their drillers.

The *facts were* this well wisher had never seen a Make and Break Rotary of any kind in use. His information was second-hand. To him all "coons" looked alike. While the truth was he was comparing a small Rotary, mostly of cast iron, built like a "Ford" and mostly of bolts; that could only set 10" casing against *an all steel machine made like a "Packard" that sets 18" casing;* and where the performance tests for endurance easily show that the "cheap" machine was worn and loose in its many bolted joints before the Lufkin-Taylor had shown signs of wear and without a nickle for repairs.

Fact No. 4—On endurance of the Lufkin-Taylor Rotary will appear next.

Write Continental Supply Co., Distributors

Lufkin Foundry & Machine Co.

NEW YORK CITY Woolworth Bldg. | LOS ANGELES 512 Com. Exch. Bldg. | **Lufkin, Texas** | HOUSTON 806 Carter Bldg. | TULSA, OKLA. 317 Roberts Bldg.

36" Transit Pumps

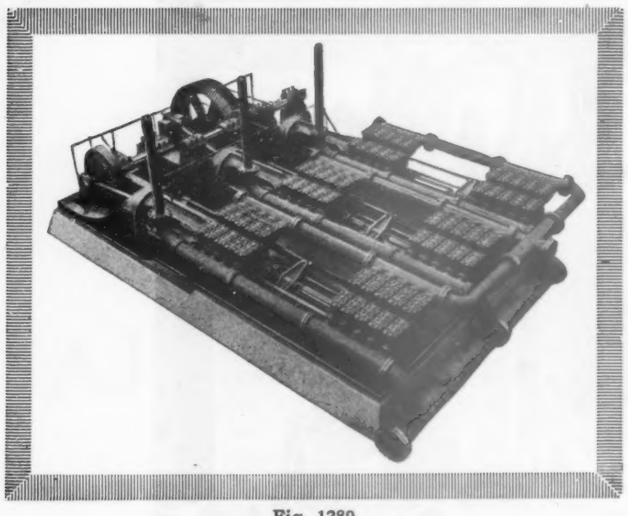


Fig. 1289
6½ x 36" Horizontal Triplex Power Pump. Pumps 1670 barrels per hour against 900 lbs. line pressure.

Long Stroke *means* Long Life

Overcoming the inertia of the rods and pistons, and the fluid, at the end of each stroke consumes power and increases the wear and tear of all moving parts. The solution is to use slow moving, long stroke pumps, especially on heavy work.

Ask for description and prints of this pump.....

NATIONAL TRANSIT PUMP & MACHINE CO.
Oil City, Pa.

District Offices: New York Pittsburgh Philadelphia Cleveland Tulsa Denver Houston

FEW OSAGE LEASES ATTRACTIVE TO OIL MEN

(Continued from Page 28)

tract 349, southeast quarter of Section 12-27-5. The former was knocked down to the Phillips Petroleum Co. for $216,000 after a spirited bidding in which the Prairie, Texas, Carter and Skelly Oil Cos. took part. The latter tract went to the Prairie Oil & Gas Co. for $300,000 after the Carter Oil Co. had bid as high as its production officials considered the property was worth to the company. The Prairie Oil & Gas Co. also got tract 344, down in the southeast corner of the field, the southwest quarter of Section 15-26-6, paying $25,000 for it. West of it, across three-quarter sections, lies tract 345, southwest quarter of Section 17-26-6, which was knocked down to M. Lindsey of Stamford, Conn., for the bargain price of $5,200.

The attendance at the morning session was very small. Most of those present paid little attention to the sale, but spent the time reading or in low-voiced conversation so as not to interfere with Colonel Walters, the auctioneer, in his efforts to awaken some kind of spirit among his audience. The afternoon session, at which the west side tracts were sold, was well attended but most of the audience was there out of curosity.

Superintendent J. George Wright announced that there may be another sale in June, but that if there is not a double sale of two days' duration may be held in the fall.

STATEMENT OF INDIVIDUAL OSAGE LEASE SALES

Showing Date of Sale, Total Acreage Offered, Total Acreage Sold and Total Amount Realized as Bonus

Sale No.	Date—	Acreage Offered	Acreage Sold	Total Amt. of Bonus
1	November 11, 1912	107,594	24,541	$ 39,436.00
2	September 29, 1913	12,049	10,132	498,182.58
3	April 30, 1916	17,280	14,377	2,057,600.00
4	June 20, 1916	3,020	2,482	1,169,280.75
5	May 31, 1917	9,120	8,160	1,947,600.00
6	November 12, 1917	20,621	19,869	1,677,200.00
7	February 14, 1918	32,160	25,440	1,275,500.00
8	May 18, 1918	51,400	38,980	1,180,575.00
9	November 9, 1918	43,040	34,720	3,350,200.00
10	March 5, 1919	31,000	20,520	2,790,925.00
11	June 6, 1919	39,251	39,451	3,884,925.00
12	October 6, 1919	36,310	34,670	6,161,500.00
13	February 3, 1920	31,613	30,173	3,056,950.00
14	May 18, 1920	31,783	31,303	2,851,900.00
15	October 12, 1920	36,677	36,877	3,993,750.00
16	June 14, 1921	26,588	25,918	4,559,100.00
17	December 12, 1921	36,414	35,665	7,261,600.00
18	March 2, 1922	37,184	33,467	3,949,950.00
19	June 28, 1922	34,660	33,220	10,889,700.00
20	January 18, 1923	34,073	24,231	6,215,700.00
21	April 5, 1923	33,790	23,640	8,029,100.00
22	March 18-19, 1924	100,305	49,416	14,193,800.00
23	June 30, 1924	19,945	11,465	2,263,200.00
24	December 18, 1924	29,890	8,610	1,087,300.00
25	March 18, 1925	34,660	12,213	671,650.00
	Total	879,627	628,540	$94,952,074.33

SCHEDULE OF LANDS SOLD AT PUBLIC AUCTION MARCH 18, 1925, SHOWING DESCRIPTION OF LANDS, NAME OF PURCHASER AND BONUS PAID

East Side

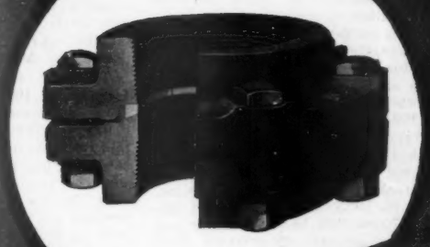
Tract	Description	Name and Address—	Bonus
*2	NW 9-27-12	Ray Branstetter	$ 500
4	NW 4-28-12	James A. Kennedy, Kennedy Bldg., Tulsa	1,700
10	NW 33-28-12	Indian Territory Illuminating Oil Co., Bartlesville	500
11	NE 4-20-11	Charles W. Grimes and P. E. Elliott, Box 1175, Tulsa, Okla.	900
12	NE 24-20-11	E. P. Harwell, Tulsa Okla.	1,700
13	NW 24-20-11	E. P. Harwell, Tulsa, Okla.	1,100
14 Fr.	NE 32-20-11	Sand Springs Home, Sand Springs, Okla.	450
15 Fr.	SE 32-20-11	Sand Springs Home, Sand Springs, Okla.	450
16 Fr.	NW 33-20-11	Sand Springs Home, Sand Springs, Okla.	400
17 Fr.	SW 33-20-11	Sand Springs Home, Sand Springs, Okla.	3,400
21	SE 28-21-11	L. C. Hivick, 603 Continental Bldg., Oklahoma City, Okla.	500
22	NE 23-22-11	Ray Branstetter, Skiatook, Okla.	500
23	SW 3-26-11	W. G. Knupp, Warren, Pa.	800
24	SE 4-27-11	Reiter Foster Oil Corp., 304 Atlas Bldg., Tulsa, Okla.	500
32	SW 11-28-11	Carroll Miller, Trustee, Pittsburgh, Pa.	500
41	NW 33-28-11	Wah Shah She Oil Co., Bartlesville, Okla.	500
42	NE 34-28-11	Wah Shah She Oil Co., Bartlesville, Okla.	700
45	NE 32-29-11	Reiter Foster Oil Corp., 304 Atlas Bldg., Tulsa, Okla.	900
46	SE 32-29-11	Reiter Foster Oil Corp., 304 Atlas Bldg., Tulsa, Okla.	500
47	NW 33-29-11	Reiter Foster Oil Corp., 304 Atlas Bldg., Tulsa, Okla.	1,100
48	SW 33-29-11	Reiter Foster Oil Corp., 304 Atlas Bldg., Tulsa, Okla.	500
49	NW 2-20-10	New England Oil & Pipe Line Co., Tulsa, Okla.	500
50	SW 2-20-10	James A. Kennedy, Kennedy Bldg., Tulsa, Okla.	800
51	NW 14-20-10	Sand Springs Home, Sand Springs, Okla.	500
52	NW 15-20-10	Sand Springs Home, Sand Springs, Okla.	500
53	SE 21-20-10	Devonian Oil Co.	500
54 Fr.	SW 21-20-10	L. C. Hivick, Oklahoma City, Okla.	1,600
55	NE 22-20-10	L. C. Hivick	500
62	NW 30-21-10	Devonian Oil Co.	1,600
63	SW 30-21-10	Devonian Oil Co.	1,100
79	NE 9-25-10	Phillips Petroleum Co.	500
80	SE 9-25-10	The Texas Co.	500
99	NW 5-27-10	Oil Assurance Corp., 1418 Flatiron Bldg., New York City	500
101	SE 8-27-10	Oil Assurance Corp.	500
102	NW 19-27-10	Oil Assurance Corp.	500
120	NW 14-29-10	Indian Territory Illuminating Oil Co., Bartlesville, Okla.	500
121	SW 14-29-10	James A. Kennedy	800
124	SW 18-29-10	Wah Shah She Oil Co.	500
127	SE 25-29-10	Indian Territory Illuminating Oil Co.	500
130	NE 2-20- 9	Devonian Oil Co., Bartlesville, Okla.	500
133 Fr.	SW 3-20- 9	Bruner Oil Co., Sand Springs, Okla.	500
136	SW 8-21- 9	Sand Springs Home	500
137	SE 12-21- 9	Devonian Oil Co.	500
140	NE 25-21- 9	Devonian Oil Co.	2,000
145	NE 20-22- 9	W. J. Knupp	500
146	NW 20-22- 9	W. J. Knupp	500
152	SE 34-22- 9	Ohio Osage Oil Co., 404 Exchange National Bank, Tulsa, Okla.	500
166	NE 18-24- 9	Ernest McCarty, Wynona, Okla.	500
167	NW 18-24- 9	Gypsy Oil Co.	500
172	NW 27-25- 9	Mid-Kansas Oil & Gas Co., Tulsa	500
190	SW 3-27- 9	John W. Fitzgerald, Bartlesville, Okla.	500
208	SE 32-27- 9	Phillips Petroleum Co.	500
229	SE 35-28- 9	Western American Oil Co.	500
250	NW 12-24- 8	Ernest McCarty	500
251	NE 13-24- 8	The Texas Co.	20,500
256	SE 19-25- 8	A. G. Oliphant, Atlantic Oil Producing Co., Wrightsman Petroleum Co.	1,500
258	SW 22-25- 8	J. C. Smithson, Wynona	500
259	NE 31-25- 8	A. G. Oliphant	2,300
268	NW 24-26- 8	Jess J. Worton, Pawhuska, Okla.	500
271	NW 31-26- 8	New England Oil & Pipe Line Co., Tulsa, Okla.	2,000
272	SE 31-26- 8	New England Oil & Pipe Line Co.	700
313	NE 15-29- 8	Western American Oil Co.	500
314	SE 15-29- 8	Western American Oil Co.	500
		Total East Side	$ 68,500

West Side

Tract	Description	Name and Address—	Bonus
329	NE 19-24- 7	C. Constantine, Pawhuska, Okla.	$ 500
331	NE 11-25- 7	Gypsy Oil Co., Tulsa	1,200
332	SE 11-25- 7	Gypsy Oil Co., Tulsa	1,500
333	NE 9-28- 7	R. M. Hunt, Foraker, Okla.	1,100
334	NW 10-28- 7	L. A. Gillespie	500
335 Fr.	NE 31-23- 6	Marland Oil Co.	280
337 Fr.	NW 32-23- 6	Marland Oil Co.	500

OIL COUNTRY Flange Unions

Insure Tighter Joints on Every Pipe Line



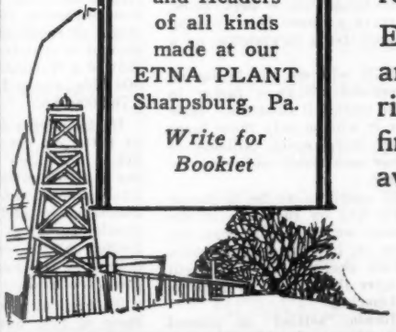
The flange union illustrated is recommended for pipe lines of every kind and particularly for ground or surface lines and those carrying heavy pressure. The brass to iron ground joint seat permits making up on pipe quickly and insures a tight joint regardless of pipe alignment.

Easy to stock, transport and install as they are so constructed that the brass seating ring cannot become dislodged. Body is of finest grade cast iron, accurately threaded; available in sizes from one to twelve inches.

Write for latest catalogue of K. and J. Valves and Fittings

Power Plant Piping, Coils and Headers of all kinds made at our ETNA PLANT Sharpsburg, Pa.

Write for Booklet



THE KELLY & JONES CO.

Manufacturers of

Dependable Valves & Fittings for all Pressures and Purposes

WORKS - GREENSBURG, PENNA.

BRANCH STORES AND OFFICES { NEW YORK - PITTSBURGH - CHICAGO - CINCINNATI BUFFALO - ST. LOUIS - SAN FRANCISCO.

No Joints--no big bills!

A STILL lined with Plibrico is like a still built of a single brick. There are no weak joints to allow bricks to protrude into the furnace—no bricks to crumble and fall out. Long furnace life and freedom from big maintenance bills is assured.

Ask for your copy of "Refractories and Furnace Design." It will tell you the complete money-saving story about this jointless lining that is installed while plastic with mallet and trowel.

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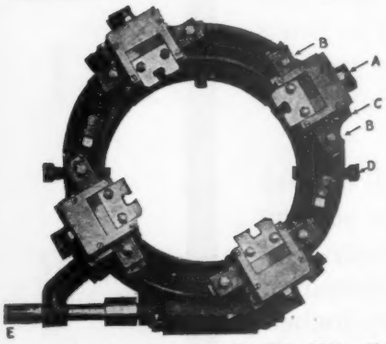
In 85 cities, you'll find Plibrico engineers and warehouse stocks. Plibrico is packed in cylindrical steel wooden-ended containers, as shown opposite, by a patented method.

O.G.J.—3-26R-RTG



The NEW Geared BEAVER Cutter

No. 106—2½ to 6"; No. 108—4½ to 8"; No. 112—9 to 12"

These new Beaver Square-End Cutters are ideal for oil field work. They are sturdy, easily portable, and are so designed as to cut pipe square with ease and speed. They operate on the famous Beaver cutting principle but differ from other large Beaver cutters in having a stationary pinion which, actuated by a ratchet handle, turns the worm gear thus operating the tool.

When it comes to real value in pipe cutters, here you have it. Does the work better than any other tool, easier and faster, and it stands the gaff of oil field use.

Sold by all leading jobbers—like all Beavers.

BEAVER

THE BORDEN COMPANY
514 Dana Ave.
Warren, Ohio

342	NE	28-25- 6	Phillips Petroleum Co.	4,800
343	NW	28-25- 6	Indian Territory Illuminating Oil Co.	5,100
344	SW	16-26- 6	Prairie Oil & Gas Co.	25,000
345	SW	17-26- 6	M. Lindsey Vick, 205 Atlantic St., Stamford, Conn.	5,200
346	SW	17-27- 6	C. B. Peters et al, Tulsa, Okla.	35,000
347	SE	2-27- 5	Phillips Petroleum Co.	6,000
348	NW	12-27- 5	Phillips Petroleum Co.	216,000
349	SE	12-27- 5	Prairie Oil & Gas Co.	300,000
351	SE	16-26- 4	A. G. Oliphant	500
			Total West Side	$603,150
			Grand total	$671,650

*All tracts sold contained 160 acres except tract 14, 80 acres; tract 15, 101.94 acres; tract 16, 80 acres; tract 17, 102.21 acres; tract 54, 101.1 acres; tract 335, 78.15 acres; tract 337, 153.31 acres.

THE PRODUCER'S OPPORTUNITY IN 1925

(Continued from Page 28)

larger percentages of gasoline from the oils run to stills—and we can reasonably expect them to get 32 per cent in 1925. On this basis they could produce 10,000,000,000 gallons of gasoline from 750,000,000 bbls. of oils run to stills. This output would take care of our domestic and export requirements in 1925 without drawing a gallon of gasoline from stock.

The estimated demand for crude oil in 1925—820,000,000 bbls.—included 20,000,000 bbls. for export, 750,000,000 bbls. to be run to stills, and 50,000,000 bbls. to be used otherwise, principally as fuel oil.

Since 1918, when we drew 23,000,000 bbls. of crude oil from storage, the real problem has not been to produce enough gasoline, but to take care of constantly growing stocks of crude oil and gasoline.

And if, in 1925, we produce and import say 770,000,000 bbls. of crude and consume and export 820,000,000 bbls. we will be in position to send 20,000,000 bbls. to foreign countries, use 50,000,000 bbls. largely for fuel, and run 750,000,000 bbls. to stills and from it make 10,000,000,000 gallons of gasoline which will take care of our domestic and foreign requirements—and all of this with no reduction in our present gasoline stocks. Crude oil stocks however, would be reduced 50,000,000 bbls.—and on December 31, 1925, would stand at about 300,000,000 bbls.

It is therefore apparent that from the standpoint of being able to produce enough gasoline, both our domestic production and our imports could drop off sharply for several years before the limiting factor of an expanding market could be a diminishing supply of gasoline.

Stabilized on Higher Price

Of course, in the meantime, the price of gasoline would have gone so high as to bring consumption into balance with production. In other words, the situation would have stabilized on a high price, whereas for years we have been running "wide open" and trying to stabilize on a low price.

The year 1925 will see the beginning of South American oil as a factor in our part of the world oil situation. How great a factor it will be only those large companies that have spent millions of dollars in these new fields can even remotely calculate.

Mexico will continue to be a factor in our problem and on the basis of the last three years we reasonably can expect a decline in imports from Mexico in 1925. This decline, however, will probably be more than offset by imports from South America.

With California "settled" at around 600,000 bbls. a day, and with a largely expanded market that will absorb this and probably any future production, to say nothing of the possibility of importing crude, California again ceases to be at least an unbalancing factor in the general situation.

And with Wortham in a decline that eliminates it as a potential market-breaker, the Texas situation seems to resolve itself into possible new fields along the Balcones, or Mexia fault zone but with neither assurance nor large promise of a "Powell" in 1925.

Present producing areas have been reviewed, past performances have been summarized, statistics of present drilling activities tabulated and production estimates recorded—but until we get the first large reaction from the drilling campaign that will result from the prices that are sure to be paid during the next few months, we will have to content ourselves with the fact that 1925 will ask for about 10,000,000,000 gallons of gasoline, and get it—that we will run about 750,000,000 bbls. of oils to stills, use 50,000,000 bbls. for other purposes, and export about 20,000,000 bbls.

These estimates are obviously closer than any for domestic production can possibly be. As imports during the last two years have furnished only about 10 per cent of our total supply of crude, any probable change from the estimated imports (70,000,000 bbls.) would make very little difference in our total supply for the year.

Advances Justified

The big factor—and the uncertain factor—for 1925, is domestic production. And with that factor not reasonably definitely determinable until probably mid-summer, and with the present situation that has been two years in the making, the producer should feel rather secure in the belief that not only are present advances justified but that they will at least "hold" until results from the big drilling compaign now getting under way are reasonably definitely known.

And it would seem logical to believe that because the present situation is the result of fundamental changes in our production and imports, which, with increasing demands, are reflected in stocks that have at least temporarily started downward, there should be no decline in present prices of crude oil for months to come.

The advances in crude prices in the early part of 1923 were premature, to say the least—we had just finished adding 82,000,000 bbls. to our storage. The advances at the beginning of 1924 were equally premature, as we had just completed adding another 82,000,000 barrels to storage. The present advances, however, are wholly justified as we have just finished adding only 18,000,000 bbls. to our storage. The forces that have been at work for two years have gathered momentum slowly. We are today just beginning to feel the effects. Our stocks of crude oil that in October, 1924, showed a withdrawal of 1,326,000 bbls., showed a November withdrawal of 2,716,000 bbls. and a December withdrawal of 6,762,000 bbls.

If the buyers of crude oil, big as well as little, do not get stampeded and bid prices too high before the results of the next several months' drilling are definitely known, and if no new fields are uncovered by mid-summer, the year 1925 should bring to the producers of the United States several hundred million dollars in the shape of higher prices for their crude oil.

Theoretically, our practice of storing three or four hundred million barrels of crude oil should enable us to take the "jolt" of a new field that over a period of months may produce 5 per cent as much oil as we already have in storage. In practice, however, it doesn't work out that way. We carry 400,000,000 barrels with stolidity—and shy at a new field that, in the aggregate, produces a few million.

The present situation is a producers' situation—after walking for years the producers are now in the saddle—but not so far out of the woods as to be entirely out of danger.

Too much current production and too much oil in storage kept crude prices down for several years. Shortage in current production and slowly decreasing stocks are the fundamental conditions that brought the present advances.

The situation today is essentially the result of fundamental changes—the cumulative effect of slow changes in the sit-

Part of 1500 HI-STEEL return-bends with Forged Flanges for cracking stills.

Hi-Steel return-bends for pressure-stills

Our Products

Electric Steel Castings
Hi-Steel Fittings
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Tank Car Bolsters, Side Frames and Repair Castings.

The return bends illustrated above show the confidence placed by one of the largest refineries in Hi-Steel fittings. This confidence is the result of a reputation for no failures at elevated pressures and temperatures.

Hi-Steel fittings are clean, solid castings of electric steel annealed, machined and tested.

They are made in standard types and sizes or to special drawings for any working conditions.

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The Ohio Steel Foundry Co.

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Springfield, Ohio

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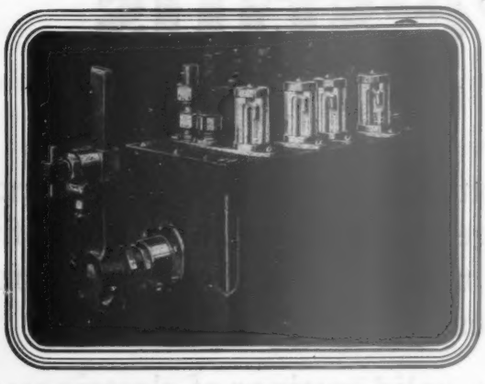
Wildcat Lubrication

Lubrication now and then is costly at any price. The lack of dependable regular lubrication of drilling and pumping units is the cause of many shutdowns, shutdowns that result in losses of hundreds of dollars.

A McCord force feed lubricator gives dependable constant lubrication. A McCord force feed lubricator starts with the engine or pump, and forces fresh, live oil to each point of lubrication as long as the engine operates. A McCord lubricator never forgets.

You can depend on McCord force feed lubricators, they take the wildcat out of lubrication.



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Lubricator Division
DETROIT

Distributed in the oil fields by
The National Supply Co.
ALL BRANCHES

McCord
force feed
Lubricators
Standard of the Oil fields

uation in the United States and in Mexico. And unless the prices of crude oil get out of all control, present prices, or even higher prices, should hold until supply and demand adjust themselves.

And—in the meantime—the market will be looking for the merchandise.

EASTERN FIELDS

(Continued from Page 52)

nah Merritt farm. In West Union district, Doddridge County, the Carter Oil Co. started to drill another test on the I. M. Smith farm. In Center district, Wetzel County, the Johns Oil & Gas Co. rigged up at another test on the H. H. Antill farm. The Hope Construction & Refining Co. started to drill on the Matthew Carney farm. In Grant district, the Hope Natural Gas Co. is down 3,065 feet on the Rachel Lowe farm and shut down.

On Little Grave Creek, Union district, Marshall County, the Decem Development Co. is starting another test on the Phillip L. Markey farm. On Five-Mile Creek, Burning Springs district, Wirt County, the Hope Construction & Refining Co has the rig completed for a second test on the Rebecca Hays farm. Located 3,500 feet northwest of the Carter Oil Co.'s test on the J. W. McDade farm, on Triplett run, Spencer district, Roane County, the Spencer Oil & Gas Co. is drilling on the W. E. Henderson farm. On Yellow Creek, Center district, Godfrey L. Cabot has the rig completed on the J. W. Whipkey farm. On Finches run, Fairmont district, Marion County, the Owens Bottle & Machine Co. has a rig up on the T. C. Browning farm. The same company is drilling a well on the Corcas Cunningham farm, in Paw-Paw district.

Southwest Pennsylvania

In McCandless Township, Allegheny County, M. M. Walley's test on the Cole heirs' farm is a duster. In Marshall Township, Walters & Co. have a gasser at a test on the Boepler farm. In the same township, Steele & Co. are fishing at 1,600 feet at a test on the S. Steele farm. Harbison & Co. have the rig completed for a test on the Reed McAney farm.

In Morris Township, Greene County, the Manufacturers Light & Heat Co. has drilled its test on the Charles Webster farm through the Bayard sand. It is a fair gasser in the lower sand. In Wayne Township, the Waynesburg Gas Co. has a Gordon sand gasser on the William McGrevey farm. In Center district, James Mitchell & Co. have a gasser in the same formation at a test on the Goldie Frye farm. In Washington district, the Philadelphia Oil Co. completed a 5-bbl. pumper in the Gordon sand on the Kelley farm.

NO EVIDENCE OF RETURN OF COAL BURNING SHIPS

(Continued from Page 24)

while recommendations for the placing of additional coal burning ships in the Baltimore fleet have been made, nothing further has been done regarding the matter. According to officials, there is nothing new or significant in shifting coal burners and oil burners from one service to another. In some cases it is found coal burners can operate more economically on certain lines or on certain trips depending on the cargo to be carried, on whether the return trip is to be made in ballast or not, on availability and cost of fuel at ports of call, etc.

Time Not an Object

In the case of the additional coal burning vessels for the Baltimore line, it was pointed out that the service of the ships in question required the return trip be made in ballast. In other words there was only the one-way cargo. Due to the fact that there was no return cargo the saving of cargo space permitted by the use of fuel oil was an unimportant factor and the actual lower cost of coal made operation of coal burning ships more economical on these particular voyages.

It was pointed out by shipping board officials that there has been no actual conversion of present oil burning ships of the Emergency Fleet Corp. back to coal, and that no change of policy is involved as regards the placing of some more coal burning ships in the Baltimore line. The Shipping Board continues to be committed to oil as regards its more important passenger and merchant vessels. The use of four coal burners by the Baltimore line in place of oil burners is nothing unusual, it is stated, and does not involve conversion of the vessels from oil to coal, but simply the reconditioning of vessels which have been laid up for some time. The oil burners replaced by these coal burners would be placed in some service where operation of oil burners is more economical than coal burners.

The oil companies are making no claim that oil is cheaper than coal on a ton for ton basis at present prices for the two fuels. A representative of one of the largest companies handling marine fuel oil states that despite the lower prices obtaining for coal the world's shipping generally is showing no tendency to go back to coal. Coal in New York bunkers is selling as low as $5.50 a ton. A rough comparison on the basis of quality, shows that four barrels of oil will do the work of a ton of coal. This indicates a price of $7.20 a ton for fuel oil as against $5.50 a ton for coal.

Fuel Contracts Continued

Grades of coal differ considerably, with prices for better bunker grades running higher than the one quoted, and the price difference is somewhat lessened when a more rigid examination of heat efficiencies of coal and oil are made. However, heat efficiency is only one factor entering into a comparison of coal and oil for ships, and the other factors are all in favor of oil.

Large marine fuel oil companies state their contracts this year have not been affected by the apparent cheapness of coal. They say that generally speaking, shipping throughout the world is committed to oil. This is beyond question, they state, as regards fast passenger and cargo vessels. In such cases the saving of the time in port is important. Oil can be bunkered in a matter of hours as against several days for coal. Saving in labor in firing with oil, compared with coal is another large factor in connection, with such vessels. These factors are operating to make shipping generally dependent upon oil, and to take fuel oil out of competition with coal so far as marine use is concerned.

It is pointed out there will always be some changing back and forth from coal and oil, depending on the vessel and the voyage it is making. This applies particularly to vessels which are equipped to burn either fuel. Some tonnage is readily convertible, particularly foreign-owned, but despite this fact oil companies in close touch with the situation state there has been very little conversion from oil to coal to date.

Where a vessel is equipped for both oil and coal and where oil is being used, the conversion back to coal can be made, as a rule, in 36 hours, and the expense is not great. Under the circumstances combination coal and oil burning ships frequently change their fuel uses when in certain services or on certain voyages where there are obvious advantages in doing so.

Tramp steamers frequently change their fuel and are the least apt to be committed to any one fuel as against another, being entirely influenced by immediate conditions. Many of them are equipped for burning either fuel oil or coal. If a tramp steamer happens to be in port where coal is dirt cheap there is little doubt but that it will use this fuel inasmuch as time is not so much of a factor with this class of vessel as with the fast steamer. Many tramp steamers which were originally coal burners but which also made fuel oil burning installations did not utilize the cargo space saved. In other words, they do not get any extra cargo space when they burn oil and therefore this factor does not influence them in favor of oil as in the case of larger vessels equipped to burn either fuel.

Considering every factor, it is stated

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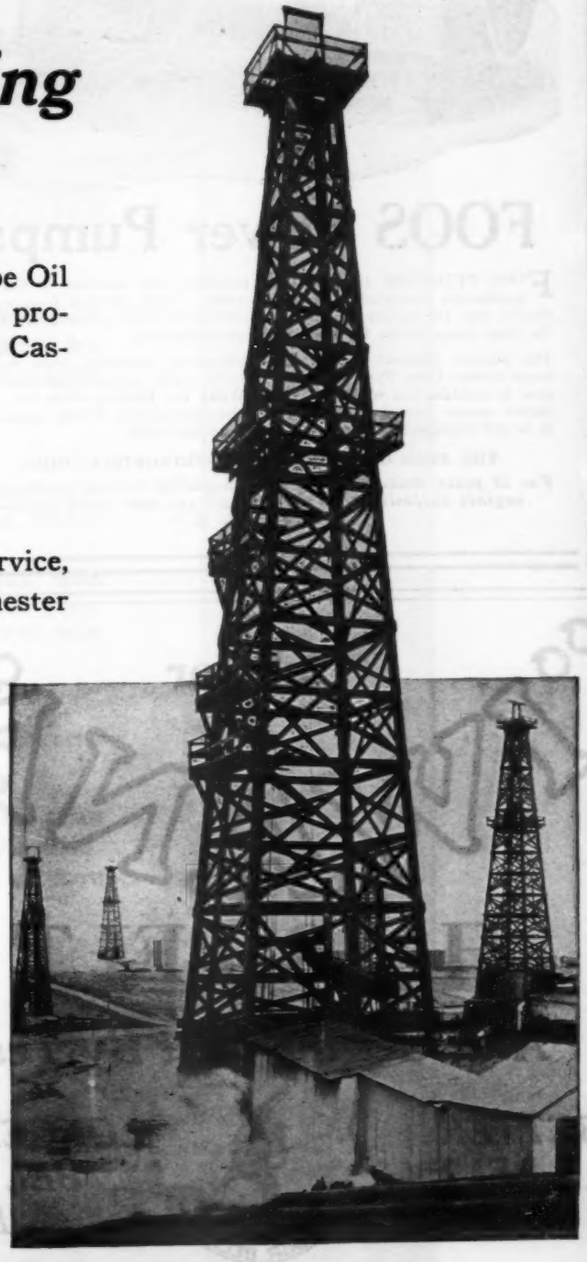

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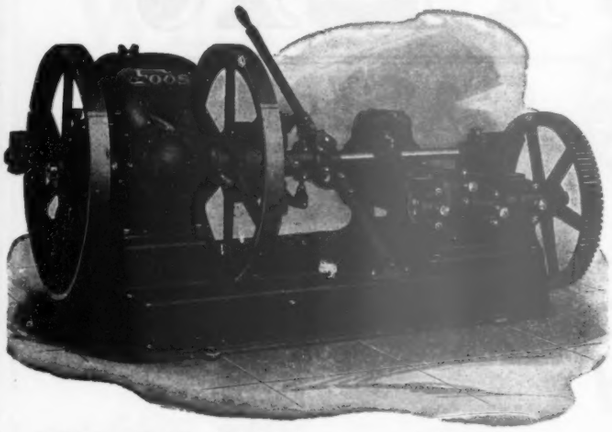

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by oil company representatives that there will probably be a good many cases of individual vessels going back from oil to coal but that these instances will be prompted by special conditions. There is no evidence of a movement for the return of coal burning ships.

BOARD ASK OPINION OF OIL-GAS JOURNALS

(Continued from Page 23)

"(a) Are there too many "links in the chain from producer to consumer?"

"(b) Are there too many retail outlets for reasonable economy in distribution? The numerous roadside filling stations of the present day are, as a rule, convenient, pleasing to the eye, an assurance of quality, and a community asset; but what are the economies of this extensive duplication of facilities existing and prospective? If not justified, what remedy do you suggest?

"(5) What are the underlying causes of the more or less temporary periods of overproduction of petroleum? Do you think it will be practicable to control production, and if so, by what means or in what manner? This would include your views as to the practicability of Mr. Doherty's proposal for unit operation and any other methods of controlling the development of new pools and preventing unneeded production.

"(6) To what extent, if any, do you consider that the exploration of new pools or fields can be carried on and controlled without bringing them into actual production until the market condition warrants increased production? Do you consider that it will be practicable for the Government and the industry to cooperate in setting aside drill-tested reserves which will not be put on production until they are needed?

"(7) How can the oil industry and the public be brought to more clearly realize their respective responsibilities and to understand that the policies and practices regarding such a vital necessity of our national life as petroleum must be formulated with due regard to the general welfare?

"(8) What steps or arrangements do you consider are desirable and practicable that will lessen the handicaps which our nationals now encounter in connection with the exploration and development of foreign oil fields, and will enable them to compete on more even terms with the nationals of other countries? Include in your statement any specific assistance that you think can or should be rendered by any branch of the national Government in this matter.

"We are hoping to obtain by inquiries such as this a consensus of the best opinion, with specific suggestions as to ways and means, from those qualified to advise this board, and we therefore ask for your full cooperation. For your information a copy of the letter of the President dated December 19, 1924, is inclosed. Doubtless other phases of the problem will occur to you. Your full and frank views are desired."

Among those to whom the letter was addressed are:

Editor, The Oil and Gas Journal, Tulsa, Okla.

Editor, The Oil City Derrick, Oil City, Pa.

Frank T. Lauinger, president, The Derrick Publishing Co., Oil City, Pa.

Robert W. Egan, vice president and general manager, Petroleum Publishing Co., Tulsa, Okla.

EAST CENTRAL TEXAS

(Continued from Page 48)

In the Currie district, Navarro County, Robert Penn and others abandoned their test on the J. White farm, at 3,132 feet. The location for the Cosden Oil & Gas Co.'s No. 3 Bounds has been abandoned.

In the Richland district, Garland Kent's No. 1 Coffey, McNeill survey, tested salt water and was abandoned at 1,752 feet. The Simms Oil Co.'s No. 2 Gordon was dry and abandoned at 3,175 feet and its No. 6 Allison was shut down at 3,000 feet with nothing showing.

In Rains County Anderson and others have a derrick up for No. 1 Humphreys on the Garrett survey. Cree & Coulter are drilling below 1,200 feet in No. 1 Peoples on the Tibbles survey.

In Hunt County the Rycade Oil Co. has started drilling No. 1 Lytol, McAdams survey. The Marland Oil Co. is below 3,165 feet in its No. 1 fee, J. Hamilton survey.

In Hopkins Roxana Petroleum Corp. has derrick up for No. 1 D. C. Clark, on the Mathews survey.

Bazette Test Plugged

The Humphreys Boyd Oil Co. has plugged its test on the Walthal farm in the Bazette area, Navarro County, after having drilled to 3,274 feet. The same company has a standard rig over its gas well on the Connor farm east of the Walthal test and will drill it deeper in an effort to make a dependable gas producer out of it. If gas production is developed it will be used as fuel in the Gulf Production Co.'s test on the farm where drilling will be started soon.

The Bazette district has no water problem and if fuel requirements are met it may be an incentive to operators owning high priced Bazette acreage to test it out even if the Gulf Production Co.'s test proves a failure.

10,000 Bbls. per Acre

The production of the Wortham Field for the week ending Wednesday was 78,566 bbls. At the opening of the week it had gone below 74,000 bbls. There are 291 wells in the field. There is little likelihood that the producing territory will be extended much. The Humble Oil & Refining Co. and the Humphreys Boyd Oil Co., the biggest producers in the field have locations yet to drill but aside from these the Wortham area, which now occupies 800 acres, is about down to a strictly producing basis. Thus far the field has produced an average of over 10,000 bbls. to the acre and it is only four months old, and is producing nearly as much oil today as it averaged in February.

Humphreys Denies Rumors

Colonel A. E. Humphreys set at naught the persistent rumors that the Pure Oil Co. was about to close a deal for the purchase of the Humphreys Boyd Oil Co.'s Wortham properties when he told The Oil and Gas Journal that the Humphreys Boyd Co. had not given any one any option to buy its properties or any part thereof and that there was nothing to the report that the property is to be sold for any sum.

"It is true," Colonel Humphreys said, "that several companies have made tentative suggestions as to the purchase of its properties, but there has been nothing definite or tangible in any of the suggestions."

Color was lent to the rumor by reports that the Pure Oil Co. was keeping a close tab on the Humphreys Boyd properties as if considering the question of trying to buy them. The Humphreys Boyd Oil Co. has over 18,000 bbls. a day production in the field which is nearly a quarter of all the production in the pool and has a number of locations left that should add to the number of its producing wells.

J. K. Hughes of Mexia is offering for sale 200,000 bbls. of Wortham crude to be delivered at once at a fixed price and also 1,000,000 bbls. of Wortham and Powell crude to be sold at a fixed price and delivered at the rate of about 3,000 bbls. a day over a period of 12 months.

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CALIFORNIA FIELDS

(Continued from Page 43)

exceptions, when a cleanout job returned it to production. The General Petroleum was agreeably surprised when No. 2 Dabney was given a test after being cleaned out and deepened to 3,736 feet. It is a little deeper than its immediate neighbors but the extra depth made was more than reflected in the production obtained. On its initial test, the well tanked 1,196 bbls. of 27.7 gravity oil which registered a cut of 4 per cent. It is unusually live and the pressure, 480 pounds, has proven quite steady.

Long Beach

The decline in production at Long Beach and the fairly good prices paid for crude in the field are spurring operators in this area to deepen their present wells wherever possible to secure maximum recovery. Several holes are now being carried down and others will be starter from time to time. The Big Jumbo Oil Co. is the latest to start redrilling and deepening and, although the bit is only at 3,900 feet, the well should be returned to production within the next month or so. The Casa Blanca Oil Co. finished drilling its No. 2 Chaney at 4,935 feet and will set a string of 6¼-inch within the next few days. The Hall Weber Syndicate's No. 1-A, a redrill at 4,108 feet, will probably have to go on the pump as it has not yet shown any kick after being cleaned out. It made a small flow last week but sanded up shortly after. Santa Fe Springs was devoid of any developments of interest and although there are three new wells going down, none of them are deep enough to pick up the pay.

Rideout Heights

The Petroleum Midway, California Petroleum, suspended work on all three of its drillers in the Rideout Heights Section of the old Whittier Field during the week. The company has already abandoned No. 1 Seward and is suspending No. 1 Pellisier at 4,481 feet, No. 1 Hamburg at 4,620 feet and No. 1 Witte at 4,682 feet pending field developments. The action of the company practically means abandonment as none of the other wells drilling at present should affect the leases on which these are located. The Associated suspended work several weeks ago on No. 1 Gregg at 3,739 feet, but this hole, in addition to being unfavorably located, is in a bad mechanical condition. The Standard has carried No. 1 Patton to 6,050 feet, while the Pan American is experiencing mechanical trouble in No. 1 Jesurum at 4,448 feet. No. 2 Howard Smith of the Standard at Montebello is pumping 350 bbls. of fluid from 4,265 feet, about 65 per cent of which is water. The cut is due to bottom water, the plug placed at 4,226 feet apparently not being effective. The Union's No. 11 Yorba Linda Group at Richfield is slowly increasing on the beam and yesterday pumped 120 bbls. of 24.5 gravity oil from 4,404 feet. The outcome was somewhat disappointing, however, as it showed plenty of life previous to completion and at least a 500-bbl. was expected.

Newport

Practically all of the wells in the Newport section were idle during the past week because of the fact that the limited amount of storage available was filled up. Producers in this area are experiencing some difficulty disposing of their production, since the oil is of very little use except for road purposes. The Shell Oil Co. has cleaned No. 2 Bryant at Seal Beach down to 4,300 feet and should reach bottom within the next week or ten days. This well blew out a month or two ago at 4,398 feet but did not make any oil. No. 3 Bryant is drilling ahead at 4,145 feet. The discovery well is doing 60 bbls. of oil and 1,700 bbls. of water.

Miscellaneous Wildcats

The Manhattan Pacific Oil Co. is drilling ahead in a gray sand at 4,155 feet in its Hermosa Beach wildcat but has not yet picked up any favorable indications. The Shell cemented a string of stove pipe in No. 1 Stubbs at La Mirada at 941 feet, the bottom of the hole being 950 feet. There were no developments in the Newhall-Saugus area, the Associated drilling ahead at 3,955 feet and the Union making hole at 1,715 feet. The latter is making good progress with its wildcat at Ocean Park Heights, No. 1 Newlin and, although numerous cores are being taken, the hole is now at 2,400 feet. The Standard cemented a string of stove pipe in No. 1 Irvine, near Paulerino, at 325 feet. The Gulf Oil Corp. has closed several leases in the nearby vicinity and will, it is reported, drill a test well to prove up its holdings approximating 1,500 acres. No. 1 Hadley of the Standard, near Rivera, was spudded in during the latter part of the week and although the exact depth is not known, it should be getting around 200 feet.

Neither of the Standard's two wildcats at San Emidio showed any favorable indications during the past week. The hole on Section 28-11-22 is 4,120 feet deep while that on Section 5-10-22 is reported at 2,450 feet. The Chanslor-Canfield Midway Oil Co. had a twist-off on its Delano wildcat, Section 20-25-27, while going ahead at 3,206 feet. In the Lost Hills area the Standard is still working on its deep hole, Section 5-27-20, at 5,636 feet, with only a small chance of securing production. The General Petroleum has just spudded in an extension well in this area and made 618 feet of hole during the week. The Barnsdall and Standard Oil Cos. acquired several hundred acres on the McKittrick front during the past week and it would not be surprising if both started tests within the near future. The Union is drilling ahead at Rio Bravo in a blue shale at 5,780 feet but has very little chance of successfully finishing this wildcat. The Shell's No. 1 Mountain View, in the Weed Patch area, is equally as dry and looks quite discouraging at its present depth, 4,157 feet. The General Petroleum will carry it to a successful completion. The latter has considerable acreage in this vicinity but was financially unable to wildcat.

SEASONAL DEMAND FOR GASOLINE SHOWN BY MONTHLY PERCENTAGES

In the June, 1924, issue of Mining and Metallurgy there appeared an article, republished in The Oil and Gas Journal of June 26, discussing the seasonal variation in gasoline demand and pointing out the application of the data presented for estimating the demand for that commodity a year in advance. Because of the interest and importance of the subject a further study was made in an attempt to arrange the data in a more usable form and the results are presented in the current issue of Mining and Metallurgy by E. S. Porter.

Table No. 1

1	2	3
Calendar Year	Monthly Percentage of Total Demand 3 Yr. Average	Cumulative Percentage
January	6.22	6.22
February	5.74	11.96
March	7.24	19.20
April	7.50	26.70
May	8.62	35.32
June	9.51	44.83
July	10.05	54.88
August	10.57	65.45
September	9.41	74.86
October	9.42	84.28
November	8.13	92.41
December	7.59	100.00

The percentage of each year's total gasoline demand due to the different months was determined for the last three years and also the average percentages and average cumulative percentages by months. It was observed that the greatest deviation from the average occurred in the first few months of the year, and that after May the deviation from the average monthly cumulative percentage was slight. In other words, if one knew the demand for the first five months of the year or had some reliable means of estimating that demand he could estimate what the demand for the remaining seven months of the year would be with a fair degree of accuracy.

For that reason two sets of tables were prepared, Table No. 1 for the calendar year and Table No. 2 for the year beginning with June.

Table No. 2 may be used in estimating the demand for the first five months of the calendar year using the demand figures for the last seven months of the previous year as a basis of prediction. The accuracy of this prediction indicated by the record of the last three years should be within 1.5 per cent, but any unusual condition may easily make the prediction less accurate. Table No. 1 may then be used for estimating the demand during the remaining months of the year. The tables referred to are given herewith.

The tables were used to predict the gasoline demand for 1924 as follows: From June to December, inclusive, in 1923 the gasoline demand was 112,756,-002 bbls. On the basis of the average for the last three years (Table 2, column 3, above) ths is assumed to be 60.50 per cent of the total demand for the year ending May, 1924, which total is 100 per cent, or 186,372,000 bbls. By difference the estimated demand for the first five months of 1924 ws 73,616,000 bbls. By referring to column 3, Table 1, the latter figure is found to be 35.32 per cent of the total demand for the year whereby the total gasoline demand for 1924 was estimated to be 208,423,000 bbls. This figure may be conveniently distributed by months by using the percentages found in column 2, Table No. 2, for the months of January to May and the percentages in column 2, Table No. 1, for the remaining months.

Table No. 2

1	2	3
Calendar Year	Monthly Percentage of Total Demand 3 Yr. Average	Cumulative Percentage
June	8.90	8.90
July	9.40	18.30
August	9.90	28.20
September	8.80	37.00
October	8.82	45.82
November	7.60	53.42
December	7.08	60.50
January	7.07	67.57
February	6.30	73.87
March	7.60	81.47
April	8.60	90.07
May	9.93	100.00

The estimates made in the above manner differ by a small per cent from the actual demand figures. The greatest difference for any one month between the estimated and actual demand was 2.89 per cent for the month of January. The estimated demand for the year was only 0.92 per cent less than the actual demand.

ROCKY MOUNTAIN AREA

(Continued from Page 44)

was found productive in No. 1. The hole is over 3,000 feet deep and nearly full of oil.

The Midwest Refining Co., drilling for the Utah Oil & Refining Co. in the La-Barge district, in the southwestern part of the State, has successfully overcome recently drilling troubles, and is thought to be about to enter the sand at 2,500 feet. This is the well which found some oil in shale pockets at a shallow depth it is reported from Kemmerer that sufficient oil is still coming from these upper lenses to provide fuel for drilling purposes. In the same district, the Transcontinental Oil Co. has spudded in on No. 1, and has reached a depth of about 180 feet. This well is being drilled with a standard rig. The Superior Oil Co. is moving a rig from the Dry Piney to La-Barge, where a well will be drilled by the company.

Kevin-Sunburst

Greater activity in the Kevin-Sunburst Field in Montana will no doubt result from the recent increase in the price of this crude from $1.20 to $1.40 a barrel. Some of the independent refineries also offer a premium of 10 cents or 15 cents a barrel. At present, the roads are very bad in the Kevin district, and this condition is delaying field work. Five new wells were spudded in last week, and rigs are going up on several new locations.

The Big West Oil Co.'s No. 5 Allen made 140 bbls during its first 14 hours on the pump. This is the fourth producing well on this tract, and appears to be about the best, though it will not hold up to that figure on steady production. This is the most recent completion. The Johnson Syndicate well No. 4, on the same tract as the "Johnson gusher," should be completed soon. The Queen City Oil Co.'s No. 8 is drilling as an offset to No. 4 Johnson.

New Mexico Operations

The Midwest Refining Co has spudded in on No. 12 on the Hogback Dome in New Mexico, after a winter of inactivity. This will be a first sand well. The Continental Oil Co. is preparing to drill No. 9 in the Rattlesnake Field, location for which has been made. No. 9 will be located nearly half a mile north of No. 7 in order to test out the structure in that direction. It is understood the next test will be drilled several miles to the south of the present producing area, which is thought to lie at the northern end of the structure.

Runs From the Fields

Salt Creek	58,770
Teapot	1,500
Big Muddy	3,250
Grass Creek	4,110
Elk Basin	830
Greybull	15
Rock Creek	3,020
Lance Creek	610
Polson Spider	100
Osage	350
Hamilton Dome	770
Lander	250
Byron	100
Pilot Butte	30
Lost Soldier	5,250
Ferris	50
Cat Creek	3,600
Sunburst	3,175
Craig	830
Fort Collins	1,330
Florence	350
Boulder	35
Tow Creek	170
Rangeley	100
Hogback	520
Artesia	750
Rattlesnake	400
Miscellaneous	200
Total	90,175

N. LOUISIANA-ARKANSAS

(Continued from Page 48)

cement to set at 2,287 feet in No. C-1 Shirey, Section 35-15-17.

The Standard Oil Co. of Louisiana is rigging up No. 3 R. Benentt, Section 33-15-15; drilling No. 2 George Powell at 1,620 feet, in Section 34-15-15, and set 10-inch casing at 486 feet in No. 13 Unsted, Section 30-15-15.

The Sun Oil Co. is drilling at 1,966 feet in No. 5 Hardin, Section 27-15-16; Sutton and others set 10-inch casing at 42 feet in No. 8 Hughes, Section 28-15-16; trying to pull liner at 2,554 feet in No. 9 Hughes, same section.

Swartz and others are washing to bottom at 2,200 feet in No. 2 Burton, Section 30-15-17.

The Texas Co. is bailing to test 7 feet of sand at 2,280 feet in No. 2 Neely, Section 27-15-16; set 8-inch casing at 1,875 feet in No. 5 Solmson, Section 32-15-16; bailing to test 15 feet of sand at 2,255 feet in No. 6 Solmson, Section 32-15-16, and bailing to test at 2,257 feet in No. 7 Solomon, in same section.

Timberlake and others are bailing to test 40 feet of sand at 2,348 feet in No. 2 Green, in Section 23-15-17; White and others tested dry, with showing of oil at 2,323 feet their No. 1 Riley, Section 22-15-17, with 17 feet of sand in the hole. They will drill deeper.

Whittiken and others set 10-inch casing at 43 feet in No. 6 Anderson, in Section 23-15-17, and set 10-inch casing at 45 feet in No. 3 Green, same section, and are now drilling at 200 feet.

O. F. Whittaker has derrick up for No. 1 Berg, Section 27-15-17; Wingfield and others are rigging up No. 1 Umsted, Section 4-16-15.

Woodley Petroleum Co. set 10-inch casing at 490 feet in No. 3 Umsted, Section 4-16-15, and is rigging up No. 4 Umsted, same section.

Cotton Valley—Wester Parish

Drilling activity is steadily increasing in this district. The Alabama Petroleum Co. is drilling in gumbo at 2,375 feet in No. B-3 Pardee, Section 24-21-10; Crusader Oil Producing Co. set 6-inch casing

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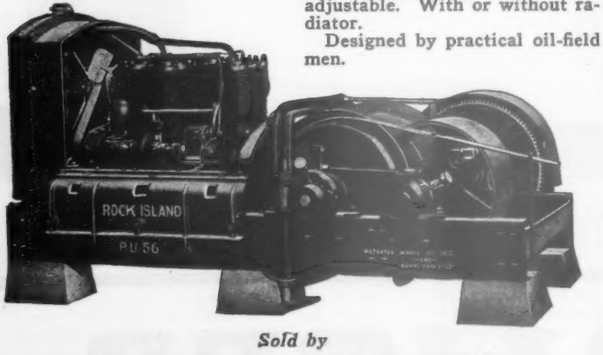

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at 2,477 feet in No. B-15 Hope Estate, Section 25-21-10, and in No. B-16, same section; drilling lime at 1,800 feet in No. B-17, Section 25-21-10.

Fortuna Oil Co. has derrick up for No. 1 Branton, in Section 16-22-9; set 10-inch casing at 420 feet in No. 1 R. R. Cox, and drilling at 860 feet.

Humble Oil & Refining Co.'s No. B-13 Bodcau, in Section 28-21-10, is standing with 960 feet of oil in the hole at 2,572 feet, and waiting on standard rig in 18 feet of sand; set 6-inch casing at 2,473 feet in No. B-14, Section 13-21-10, and in No. B-15 Bodcau, same section; set 6-inch casing at 2,495 feet in No. B-17 Bodcau, in Section 28-21-10; set 6-inch casing at 2,490 feet in No. 3 Gray, Section 26-21-10; drilling shale at 2,359 feet in No. 4 Gray, same section, and set 10-inch casing at 425 feet in No. 5 Gray, also Section 26-21-10.

Louisiana Oil Refining Co. set 10-inch casing at 432 feet in No. 2 Bodcau, Section 13-21-10, and drilling at 1,000 feet; drilling lime at 1,750 feet in No. 3 Crichton, Section 21-21-10; waiting on standard rig with 11 feet of sand in the hole, and 1,960 feet of oil at 2,560 feet in No. 3 Gray, Section 28-21-10; set 6-inch casing at 2,550 feet in No. 4 Gray, Section 28-21-10.

Ohio Oil Co. set 6-inch casing at 2,490 feet in No. 18 Bodcau, Section 13-21-10; No. 19 Bodcau, Section 15-21-10, is standing 2,000 feet in oil at 2,529 feet and waiting on standard rig with 6 feet of sand in the hole; set 6-inch casing at 2,524 feet in No. 20 Bodcau, same section; waiting on standard rig with 26 feet of sand in the hole at 2,564 feet, and 600 feet in oil, in No. 21 Bodcau, Section 27-21-10; waiting on standard rig with 10 feet of sand in the hole at 2,550 feet in No. 22 Bodcau, same section, and standing 700 feet in oil; derrick up for No. 26 Bodcau, in Section 15-21-10; drilling chalk rock at 1,800 feet in No. 2 Cox, Section 15-21-10; waiting orders at 2,562 feet in No. 3 Gray, Section 26-21-10; set 10-inch casing at 447 feet in No. 4 Gray, same section, and drilling at 850 feet; rigging up No. 6 Gray, Section 26-21-10; set 10-inch casing at 441 feet in No. 7 Gray, drilling at 1,550 feet, and made location for No. 8 Gray, in Section 26-21-10; set 6-inch casing at 2,475 feet in No. 3 B. Sidney, Section 16-21-10.

Oil Fields Gas Co. set 6-inch casing at 2,550 feet in No. 2 Jordan-Young, Section 34-23-10, and set 6-inch casing at 2,582 feet in No. 1 Simpson, Section 3-22-10.

Palmer & Blount's No. 1 Mason, Section 20-18-10, tested salt water with 2 feet of sand in the hole at 1,420 feet.

The Texas Co. bailed dry No. 1 Lewis, Section 25-23-10, at 2,738 feet and pulling liner to deepen.

The Standard Oil Co. is drilling gumbo at 1,700 feet in No. 1 Maynor, Section 34-23-10.

Woodley Petroleum Co. is drilling lime at 1,750 feet in No. 1 Gray, Section 26-21-10.

Bienville Parish

The Roxana Petroleum Corp. is drilling at 3,197 feet in No. 1 Bryan, in Section 30-17-6.

Bossier Parish

Boger and others are rigging up No. 2 Aikinson, in Section 3-18-12, and have derrick up for No. 1 Finey, in Section 8-18-12; Corbet and others are drilling at 1,136 feet in No. 1 Aikinson, Section 3-18-12.

Bellevue Field—Bossier Parish

Osborn and others are drilling at 400 feet in No. 2 McDade, Section 32-19-11; G. W. Wetherbee got salt water at 398 feet in No. 5 Bliss & Wetherbee, Section 23-19-11, and abandoned the test; drilling at 186 feet in No. 6 Bliss & Wetherbee, same section.

Caddo Parish

Dixie Oil Co. is drilling at 3,582 feet in No. B-1 W. B. and L. L. Noel, Section 24-21-15; set 6-inch casing at 3,575 feet in No. 53 Robertshaw, Section 13-21-15; Flournoy, trustee, drilling at 1,115 feet in No. 1 Simpson, in Section 8-16-15.

Fortuna Oil Co. set 12-inch casing at 728 feet in No. 2 Levee Board, Section 8-20-15; drilling shale at 1,265 feet in No. 1 Mitchell, Section 17-18-16; (this is 4 miles west of Cross Lake), arranging to set 4-inch casing at 3,550 feet in No. 10 Robertshaw, Section 23-21-15.

W. M. Cross and others set and cemented 10-inch casing at 950 feet in No. 3. H. Rives and others, Section 5-20-16.

Gulf Refining Co. is arranging to set 4-inch casing at 2,557 feet in No. 60 Ferry Lake, Section 14-20-16; drilling chalk rock at 1,650 feet in No. 221 Ferry Lake, Section 16-20-16; D. C. Richardson's No. 1 Williamson, Section 1-18-15, waiting orders at 1,147 feet.

A. C. Scott and others are drilling at 1,500 feet in No. 1 Stringfellow, Section 19-17-16.

Standard Oil Co.'s No. 170 Stiles, Section 27-21-16, will be deepened with tools from 2,362 feet. This shows a little oil.

The Texas Co. is drilling hard lime at 2,926 feet in No. 3 Huron Land Co., Section 8-15-12, and has derrick up in Section 15-15-12, for No. 1 Hutchinson; drilling gumbo at 2,060 feet in No. 10 Russell, Section 3-20-16.

Waterman Drilling & Development Co. is drilling at 1,625 feet in No. 1 Hunting Club, Section 17-17-16; Woodley & Collins are drilling at 50 feet in No. 1 McVea, Section 23-19-14.

Caldwell Parish

Culver and others are drilling at 3,320 feet in No. 1 fee, in Section 21-14-4, 5 miles north of Columbia.

Claiborne Parrish

The Triangle Drilling Co. set 12-inch casing at 178 feet in No. 1 J. H. Cox, Section 7-19-5; Woodley & Collins are drilling at 760 feet in No. 1 Oakes, Section 8-20-5, 10 miles southeast of Homer.

De Soto Parish

Greyhound Syndicate is drilling at 3,200 feet in No. 1 Pollock, Section 36-11-14, 4 miles sout hof the old Spider district; L. V. Ulrey tested No. 1 Patterson Robinson, in Section 22-11-12, tested good showing of oil at 2,902 feet, pulled liner at 2,907 feet, and drilling at 2,930 feet.

La Salle Parish

Bur Ban Oil Co. is drilling at 2,385 feet in No. 2 Urania, Section 21-11-2e.

Gulf Refining Co. is drilling No. A-1 Urania, in Section 22-11-2e, at 2,362 feet; Urania Petroleum Co. set 8-inch casing at 1,493 feet in No. 6 Urania, Section 18-10-2e.

Ouachita Parish

Dickson & Frue are drilling at 2,774 feet in No. 1 Goodwin, in Section 24-18-2e; Southern Carbon Co. is drilling at 2,015 feet in No. 46 fee, Section 11-19-4; J. P. White and others drilling at 2,150 feet in No. 1 Jones, in Section 6-19-5.

Sabine Parish

L. M. Emlet is drilling at 1,430 feet in No. 4 Howman H. Lumber Co., in Section 8-7-12, and drilling at 2,516 feet in No. 5 Bowman Lumber Co., Section 9-7-12, 3 miles southeast of Zwolle; Flo-La Oil Co. set and cemented 10-inch casing at 1,900 feet in No. 1 E. A. Walker, Section 8-5-12, in the south end of the parish.

Union Parish

The Sims Oil Co. is arranging to abandon its test in Section 16-22-5w, 8 miles south of Junction City, at 3,148 feet, No. 1 James.

The Texas Co. has made locations for No. 1 Jimmy, in Section 9-20-4e, and No. 3 Grayling, Section 21-20-4; the Thrift Co. made a location for No. 1 Smith Russell, in Section 12-20-4.

Columbia County, Arkansas

The Arkansas Fuel Oil Co. is running core barrel at 3,078 feet in No. 1 W. E. Hardy, Section 1-19-22; Magnolia Development Co. is drilling plug at 2,257 feet in No. 1 Phil Lindsay, Section 30-18-19, and abandoned the test of No. 2 Watson, Section 36-15-20.

Transcontinental Oil Co. has derrick up for No. 1 McClurkin, in Section 6-16-19; Virgil Heath, trustee, drilling shale at 2,525 feet in No. 1 Williams, Section 1-19-21; Wingfield & Mitchell shut down No. 1 Bodcau, Section 4-20-21, at 1,500 feet.

Drew County

Rhodes and others are drilling at 2,511 feet in No. 2 Harrison, Section 5-13-8; Hill & Arnold abandoned No. 1 Meek, in Section 8-4-12.

Hempstead County

Grassy Lake Oil Association is drilling lime at 2,030 feet in No. 1 Gun Club, Section 27-12-27.

Humble Oil & Refining Co. is drilling

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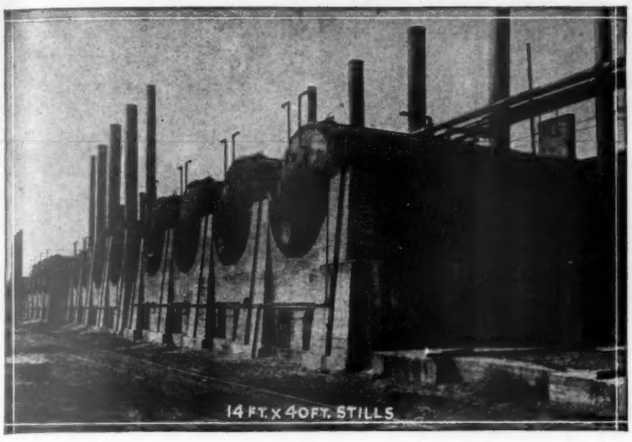

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at 830 feet in No. 1 Bodcau-Kitchens, Section 24-15-23; Kansas Petroleum Co. tested dry with its No. 2 Red River Land Co., Section 3-20-24.

Little River County

Gaines and others are underreaming 5-inch casing at 3,830 feet in No. 1 Goodrun Timber Co., Section 15-13-29; Grote and others are shut down waiting casing at 3,600 feet in No. 1 Allen, Section 2-13-31.

Miller County

Coplen and others have shut down No. 1 Wiseman, Section 36-15-27, at 340 feet, (10 miles east of Texarkana); Dr. F. F. Nigh and others are drilling shale at 2,710 feet in No. 1 Thomas, Section 12-20-28, 3 miles northeast of Rodessa, and just across State line.

Nevada County

Ames and others are waiting on standard rig with 8 feet of sand in the hole at 1,188 feet in No. 4 Womack, Section 10-14-21; Garrett and others are shut down waiting for water at 800 feet in No. 1 Snell, Section 10-12-23.

Smitherman - McDonald are drilling sandy shale at 2,910 feet in No. 3 Womack, Section 10-14-21; Zing and others are fishing drill stem at 800 feet in No. 2 Womack, in Section 10-14-21.

OKLAHOMA FIELDS

(Continued from Page 40)

28-3s-1, was estimated good for 40 bbls. from sand at 1,157-65 feet; No. 7 Clay, CWL NW NW NE, Section 28-5s-1, was good for 40 bbls. naturally from sand at 828-35 feet.

The Humble Oil & Refining Co.'s No. 1, C NW NW NW, Section 19-1s-3w, was spudding in. The Rockland Oil Co. had a rig up for No. 11 Ringling, C NW NE SE, Section 34-2s-3w.

Grady County

The Little Nick Oil Co.'s No. 2 Chandler, NE cor. SE, Section 27-5-8w, Grady County, was shut in for 2,500,000 feet of gas at 1,293-1,337 feet. Powell Briscoe's No. 1 Williams, C NE SE, Section 11-4-8w, had broken sands at 2,201-2,350 feet, and was shut in for 10,000,000 feet of gas.

Garvin County

The Magnolia Petroleum Co. was spudding in No. 1 Ban, C SE SE NE, Section 19-3-4w, Garvin County. The Texas & Pacific Oil Co.'s No. 4 Derdyn, C SE SW SE, Section 8-1-3w, was rigging up. The Carter Oil Co.'s No. 1 Derdyn, C SW SW NW, Section 17-1-3w, was drilling at 900 feet.

Cotton County

Sherrin & Arrington's No. 2 McCord, C NE NW SW, Section 26-2s-11w, Cotton County, was dry and abandoned at 2,510 feet.

Stephens County

Kelly and others' No. 1 Warner, SW cor. NW NE, Section 22-1s-8w, in Stephens County, was shut in for 2,000,000 feet of gas at 2,009-2,013 feet. McBride & Foster's No. 1 Bunch, CNL NE SW SE, Section 22-1s-8w, was dry and abandoned at 2,102 feet. Crump & Beard's No. 3 Thompson, SE cor. SW NE, Section 32-1s-8w, was pumping 5 bbls. from sand at 2,261-65 feet. The same owners' No. 6 Cantrell, SW cor. NE, Section 32-1s-8w, was deepened and making 25 bbls. from a sand at 2,243-46 feet; No. 8 Cantrell, CEL SW NE, same section, was deepened to the same horizon and making 25 bbls. daily at 2,242-47 feet. Wells, Pearson & Smith's No. 1 Enloe, SE cor. SW, Section 36-2s-8w, was dry and abandoned at 3,040 feet. The Ka Wye Oil Co.'s No. 1 Coffett, NE cor. NE NE SE, Sectoin 26-1-9w, was shut in for 22,000,000 feet of gas at 1,932-39 feet. The Roxana Petroleum Corp.'s No. 2 Hall, SW cor. NW NW, Section 29-1s-8w, was good for 15 bbls. naturally from sand at 2,395-96 feet. The Lone Star Gas Co.'s No. 8 Brown, NE cor. SE NE, Section 30-1s-8w, had broken sands at 2,401-06 feet and was good for 5 bbls. on the pump. Crump & Beard's No. 3 Thompson, SE cor. SW NE, Section 32-1s-8w, was a 5-bbl. pumper from broken sands at 2,261-65 feet. The same owners' No. 2 Cantrell, CNL NW NW SE, Section 32-1s-8w, was estimated good for 20 bbls. on the pump, with sand at 2,253-60 feet. The Magnolia Petroleum Co.'s No. 16, CSL NE, Section 33-1s-8w, made 40 bbls. of oil and 35 bbls. of water from sands at 1,675-80 feet. The Lone Star Gas Co.'s No. 1 Armstrong, SW cor. SE SE, Section 24-1s-9w, was dry at 2,305 feet. The Magnolia Petroleum Co.'s No. 3 Martin, CSL SE NE SW, Section 11-2s-5w, was dry and abandoned at 900 feet.

Crump & Beard's No. 3 Cantrell, NW cor. SE, Section 32-1s-8w, an old well, was drilling at 2,200 feet, deepening from old total depth of 2,190 feet. E. P. Kilgore was moving in tools for No. 1, NW cor. SW NE, Section 2-1-5w.

The Lone Star Gas Co.'s No. 1 Dolan, SW cor. NE, Section 15-1s-8w, was drilling at 340 feet. The Magnolia Petroleum Co. was rigging up No. 4 Worrell, SW cor. NW, Section 19-1s-8w.

GULF COAST

(Continued from Page 34)

Cullen and others' No. 6 Howe at Pierce Junction is drilling around 1,750 feet. The Texas Exploration's No. 7 Dooley is fishing at 3,410 feet and the Gulf's No. 2 Cain deepening at 3,975 feet.

Saratoga Pool

In the Saratoga Pool, the Rio Bravo Oil Co.'s No. 3 Bryan which came in last week making 700 bbls. and sanded at 2,669 feet has been reclaimed and is flowing 200 bbls. by heads. Screen was set in 18-feet of sand and shale. The location is 2 miles north of production. The Rio Bravo Co. is rigging Nos. 1 and 2 Fountaine. The Yount-Lee Oil Co. and the Sun Oil Co. are also starting tests on the north side. In the old section of the pool, the Regna Oil Co.'s No. 1 Petty is pumping 15 bbls. at 1,300 feet. The Gulf Production Co.'s No. 34 B. B. C. is bailing at 950 feet.

Spindletop

In the Spindletop section, the Stella Oil Co.'s No. 8 McFadden is drilling around 650 feet. The Unity Oil Co.'s No. 43 National is pumping 5 bbls. at 872 feet; No. 85 McFadden is rigging up. Wilson and Broach's No. 47 Higgins is rigging up. The Baker Oil Co.'s No. 13 Trembly is drilling around 710 feet. The Gulf Production Co.'s No. 149 Gladys is pumping 75 bbls. at 875 feet; No. 213 is rigging up.

The Ada Belle Oil Co.'s No. 92 Texas Co. at Batson is drilling around 350 feet. The Paraffine Oil Co.'s No. 39 Paraffine is pumping 5 bbls. at 1,015 feet. Buchanan's No. 81 Milholm is pumping 10 bbls. at 1,155 feet; No. 82 is a location. Anderson and Munsen's No. 2 Hodges is drilling around 1925 feet. The East Batson Oil Co.'s No. 9 Lone Acre is bailing at 475 feet. The Gulf Production Co.'s No. 60 Choate is rigging up.

West Columbia

At West Columbia, the Humble Oil & Refining Co.'s No. 10 Tyndall-Wyoming is drilling around 925 feet; No. 1 L. J. Wilson is drilling around 2,510 feet. The Hyde Production Co.'s No. 1 McGregor was abandoned at 800 feet; No. 2 is rigging up.

South Louisiana

In the Jennings Pool, the Gulf Refining Co.'s No. 34 Jennings-Chicago is flowing 400 bbls. at 3.340 feet. It is a workover. The Gulf Pipe Line Co. has announced a cut of 25 cents in the Jennings Pool effective March 19.

The Roxana Petroleum Corp.'s No. 1 Hunter at Edgerly is drilling around 4,200 feet. G. W. Gray's No. 1 Lilliard tested salt water at 2,330 feet and will sidetrack. The Gulf Refining Co.'s No. 32 Bright Penn is rigging up to deepen.

Southwest Fields

Lack of water has caused a curtailment of operations in the Southwest Fields and also among the wildcat wells. In Jim Hogg County, Henne, Winch & Farris are drilling in No. 7 Martinez. No. 9 Martinez is a 200-bbl. well at 1,906 feet. No. 10 Martinez is one of the same capacity at 1,998 feet.

Over in the Webb County Pools, the Magnolia Petroleum Co.'s No. 3 Los Ojulas is bailing at 1,875 feet; with 400 of fluid in the hole. It is in new territory heretofore considered dry, being 1 mile southeast of Mirando City and east of the gassers there.

The Magnolia Petroleum Co. and the Texpato Pipe Line Co. have both posted $1 for southwest crude. The Sun Oil Co. has posted $1.70 for High Island.

Kisselman and St. Albans are drilling No. 14 Holbein, and the Big Bend Oil Co. No. 8 Martinez.

In the Luling District

The United North & South Oil Co. is drilling No. 5 Tiller and No. 8 Martinez. The B. K. Oil Co. has started No. 3 Fields. Five rigs are starting in the neighborhood of the Story-LeFevre's No. 1 Brewster, 6 miles northeast of Lockhart which is producing 110 bbls. from the serpentine formation at 1,250 feet. The United North & South's No. 1 Callihan was given the fourth shot in packed sand and is credited with 10 bbls. It is 5 miles south of Lockhart. Leasing is active in the territory between the two wells.

In the Calliham district in McMullen County, the Three Rivers Oil Co. is drilling No. 5 Glass and J. H. Means No. 2 Shriner.

In the Minerva-Rockdale district in Milam County the Fogle Oil Co. has started No. 15 McClellan and Caudle is drilling No. 1 Krotz.

KANSAS FIELDS

(Continued from Page 40)

Phillips Petroleum Co. had a rig up for No. 3 C N half NE NE, Section 7-23-11. The Franklin Oil Co.'s No. 2 Meyers, NW cor. SW SE, Section 10-24-12, was drilling at 800 feet. The same company had a machine on the ground for No. 2 Flemming, SW cor. NE NE, Section 15-24-12. Roth & Faurot had a rig on the ground for No. 1, NE cor. SW, Section 35-25-11. McGinnis and others had a rig on the ground for No. 2 Kipfer, NE cor. SW NE, Section 13-22-10. The Syndicate Oil Co. had a rig up for No. 2 Kipfer, NW cor. SE NE, Section 13-22-10. The Mid-Kansas Oil & Gas Co.'s No. 20, C NW NE SE, Section 23-23-10, was rigging up. The same company had rigs on the ground for No. 21 Allen, C CW SE NE, Section 23-23-10, No. 21 Martindale, C SW SE NE, Section 23-23-10, No. 22 Martindale, C NE SW SE,

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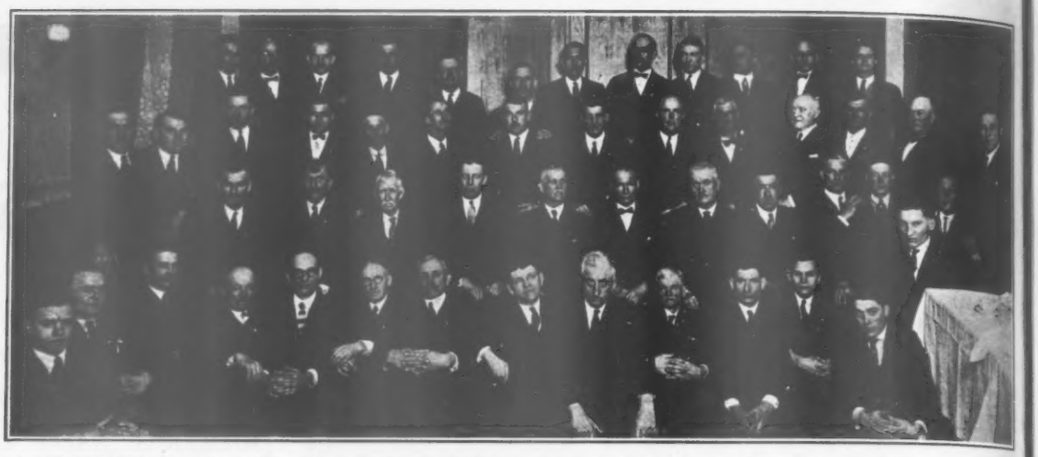

PITTSBURGH, Pa., March 20.—At a testimonial dinner in honor of P. F. Egan, at the Seventh Avenue Hotel here, on the occasion of his retirement, after more than 45 years of continuous service in the pipe line business, more than 30 years of which was spent as field superintendent of the Southwest Pennsylvania Pipe Lines in the Tri-State district, the following old friends and former associates were present: E. G. Wright, R. P. Shearer, W. H. O'Day, John Darr, J. S. O'Brien, W. H. Fisher, F. B. Fritz, J. J. Kenney, R. L. Cronise, T. T. Towl, C. K. Simmons, G. F. Sharp, F. H. Hilditch, L. L. Oesterling, Frank McCue, R. W. Mason, W. H. Cook, Frank Walker, W. W. Maloney, J. B. Durkin, L. H. Walters, T. R. Hepelwhite, George R. Dinsmore, W. L. Shanor, F. P. Walters, C. E. Slates, W. B. Elder, F. C. Gangloff, E. V. Barrett, J. H. Redpath, Phillip Yingling, Ed Tomlinson, G. L. Slade, I. N. Holland, Niel Little, T. M. Hogan, F. W. Gerwich, F. H. Herman, Harry Richards, Warren Willoughby, C. A. Holliday, Eugene O'Brien, W. H. Moore, J. Holmes, C. A. Gribbin, O. M. Baker, L. L. Hahn, D. L. Jolly, Charles Bauman, J. F. McComb, George Masquiler, M. W. McGuane, F. D. Pew, Frank Heaps, J. W. Watson, C. M. Heaps, S. A. Alexander, F. E. Bernard, W. H. Hartman, W. J. Golden, J. K. Riley, J. T. Scally, J. H. Yingling, C. M. Hogan, D. S. Wakenight, and J. P. McHaffie.

Mr. Egan having previously expressed his intention to travel some after his retirement following the dinner was presented with a trunk and traveler's bag. E. G. Wright, former vice president and general superintendent of the Southwest Pennsylvania Pipe Line Co. now retired, with J. J. Kenney, general superintendent of the Eureka Pipe Line Co., as spokesman, presented Mr. Egan with a gold-mounted cane.

On account of their inability to be present at the dinner, letters of regret were received from Forrest M. Towl and A. T. Towl of New York, president and vice president respectively, of the Southern Group of Pipe Lines; W. B. Rogers, retired, of Cleveland, Ohio, formerly of the right-of-way department, and H. C. Roess of Oil City, Pa., formerly of the right-of-way department, now retired. W. H. Fisher of Washington, Pa., will succeed Mr. Egan as superintendent.

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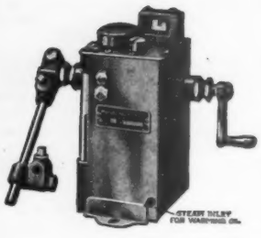

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In Atlanta there is a concern that makes just a soft drink;

In Dayton one institution makes nothing but cash registers;

In Chicago one factory makes nothing but pipe tools.

The Nye Tool and Machine Works

And all these fellows make one thing—and make it well!
Coca-Cola, Kodaks, National Cash Registers and Nye Dies, each is the best in its line.
When you buy Nye Dies you are not buying a sideline, but a specialty. I have put all my eggs in one basket, but they're guaranteed eggs!—Harry G. Nye.
Nye Cutter Wheels and Toledo Pipe Threaders for sale by all leading jobbers.

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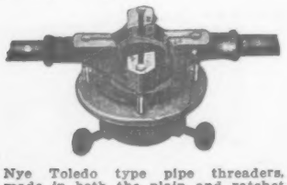
NYE thin blade cutter wheel, made to fit all standard pipe cutters. Guaranteed against breakage in use.



Nye Toledo type pipe threaders, made in both the plain and ratchet type. Satisfaction absolutely guaranteed. Sent on free trial to any dealer.

No. 1 Nye Toledo threader complete .....$9.60 net
No. 1-A Nye Toledo Pipe Threader complete .....$12.00 net

Section 31-23-10, had a rig up for No. 20 Martindale, C NE NW SE, Section 31-23-10, and was spudding in No. 19 Martindale, C SE NW SE, Section 31-23-10. Smith and others' No. 1 Christy, SE cor. NE NW, Section 5-24-9, was drilling at 870 feet. Polhamus and others' No. 2, CEL SE SW, Section 27-24-9, was drilling at 1,220 feet. The Roxana Petroleum Corp. was spudding in No. 5 Marshall, SE cor. NE NW, Section 34-24-9. The Arkansas Fuel Oil Co. had rigs up for No. 7 Marshall, SE cor. NW SE SW, Section 1-24-9, and No. 8 Marshall, NE cor. SW, Section 1-24-9. Roth & Faurot were building a rig for No. 6 Cartwright, CEL NE NE, Section 1-24-9. The Transcontinental Oil Co.'s No. 12 Olson, CNL SW SE, Section 11-24-9, was drilling at 500 feet. The Prairie Oil & Gas Co. had a rig on the ground for No. 11 Hellman, C SW, Section 14-24-9. Rodgers and others' No. 12 Cartwright, CWL NW NW, Section 6-24-10, was rigging up. The Great Southern Oil Co. was rigging up No. 23 Hull, SW cor. NE SW SW, Section 2-26-8. The Mission Oil Co. was rigging up No. 47 Thrall, C N half NW SE, Section 28-23-10, and No. 48 Thrall, NE cor. NW NE SE, Section 29-23-10. The Mid-Kansas Oil & Gas Co. had a rig on the ground for No. 23 Martindale, C SW NW SE, Section 31-23-10. The Phillips Petroleum Co. had a rig up for No. 7 Lewis, C NE NW NW, Section 32-23-10.

Cowley County

Sandford & Garden's No. 1 Wolf, C NW NW SE, Section 26-24-3, Cowley County, was dry and abandoned at 2,802 feet. Connell and others' No. 1 King, C NE NW SW, Section 17-24-4, was swabbing 300 bbls. with a trace of water; the sand is at 2,544-46 feet. The Marland Oil Co.'s No. 4 Wood, C NW NE NE, Nection 9-33-3, was making 75 bbls. of oil with 50 per cent water from sand at 3,515-30 feet. The Trees Oil Co.'s No. 1 Warren, SW cor. NE, Section 10-35-5, was dry and abandoned at 3,224 feet. The Waite Phillips Co. and others' No. 2 Glasgow, C NE SE SW, Section 20-33-3, was completed for 350 bbls. with sand at 3,216-61 feet.

The Vickers Petroleum Co. had a rig up for No. 1, SE cor. NE NW, Section 12-24-3. The Phillips Petroleum Co. was spudding in No. 1 Sullivan, C SE SE SE, Section 34-24-3. The Roxana Petroleum Corp. was rigging up No. 1 Gale, C NE NW NE, Section 8-25-3. Roth & Faurot had a rig up for No. 1 Burke, NW cor. NE, Section 11-24-8. The Waite Phillips Co. had a rig up for No. 1, C SW SW NW, Section 14-30-3. The Lewis Oil Co. was rigging up No. 5 Elliott, NE cor. NW SE, Section 31-30-6. The Roxana Petroleum Corp. had 40 bbls. estimated at 2,561-80 feet, and was drilling at 2,685 feet.

Rainbow Bend Pool

In the Rainbow Bend Field, the Waite Phillips Co. with the Marland Oil Co. and the Independent Oil & Gas Co. showed the following progress: No. 5, C SE NW NW, Section 20-33-3, rigging up; No. 6, C NE NW NW, Section 20, rig up; No. 6, C SW NW SW, Section 20, rigging up; No. 3, C SE SE SE, Section 20, spudding in; No. 4, C SW NE SE, Section 20, rig up; No. 5, C NW SE SE, Section 20, rig up; No. 6, C SW SE SE, Section 20, rig up; No. 7, C SE NE SE, Section 20, rig on ground; No. 8, C NE SE SE, Section 20, rig on ground; No. 6, C SE NW SE, Section 20-33-3, rig up; No. 7, C NE SW SE, Section 20, rig up; No. 8, C SE SW SE, Section 20, rig up; No. 12, C NE SW NE, Section 20, rig on ground; No. 2, C NW SW SW, Section 21, rigging up; No. 2, C NE NW NW, Section 28, rig on ground; No. 2, C NE NE NE, Section 29, spudding in; No. 4, C NE NW NE, Section 29, rig up.

Bunnell and others had a rig up for No. 1 Pollock, C NE NE SW, Section 15-34-4. T. B. Slick had a rig up for No. 4 Buzzi, C NW NW SE, Section 8-35-4.

Sedgwick County

E. B. Merriam and others' No. 1 Landon, C SE SE SE, Section 14-28-2, in Sedgwick County, was dry and abandoned at 3,530 feet.

Sumner County

The Champlin Refining Co.'s No. 2 Hitchcock, C SE SE, Section 16-30-1w, Sumner County, was dry and abandoned at 3,662 feet. The same company's No. 1, C NE SE, Section 17-30-1w, was a duster at 3,968 feet.

The Mid-Continent Petroleum Corp. had a rig up for No. 1 Riner, C NW NW NW, Section 36-30-2w.

Chautauqua County

Page Bros.' No. 1 Moffitt, SW cor. SE SE, Section 24-34-10, in Chautauqua County, was dry and abandoned at 2,[illegible] feet. The Empire Gas & Fuel Co.'s No. 2 Hester, CSL SW NE NW, Section [illegible] 23-13, was dry and abandoned at 1,[illegible] feet. G. C. Moore and others' No. 1 Morriss, SE cor. NE NW, Section 21-34-12, was dry and abandoned at 1,623. Polhamus and others' No. 1, NE cor. SE, Section 21-24-13, was a duster at 1,[illegible] feet. Kettle and others' No. Morriss, SE cor., Section 29-24-13, was dry and abandoned at 2,071 feet. Bisagno and others' No. 5, NW cor. NE NE, Section 6-25-13, had sand at 1,535-68 feet, and was good for 30 bbls. after a 60-quart shot. Dunn and others' No. 1, SW cor. Section 5-33-12, was spudded in and shut down. Denman and others' No. 1 Kingman, NE cor. NW NE, Section 17-33-11, was dry at 2,215 feet.

Charles Cross and others were spudding in No. 1 Raglin, NW cor. SW, Section 28-24-13. Kettles and others had a rig up for No 2 Morriss, CSL NW NW, Section 28-24-13. The Prairie Oil & Gas Co. had a rig up for No. 1 Brown, SE cor. SW NW, Section 26-34-11.

Butler County

Port Fleeger's No. 7, CSL SE SE SE, Section 19-25-5, Butler County, was making 40 bbls. after a 20-quart shot at [illegible] 712 feet. The Empire Gas & Fuel Co.'s No. 33, C SW SW SW, Section 11-24-4, had sand at 2,580-82 feet, and was good for 115 bbls. and 10 per cent water. H. B. Garden and others' No. 2 Crowley, NE cor. SW NE, Section 22-24-4, was dry and abandoned at 2,885 feet. Shawver and others' No. 1, SW cor. SE NE, Section 29-29-5, was dry and abandoned at 2,906 feet.

The Empire Gas & Fuel Co. was spudding in No. 155 Wilson, SW cor. SE NW, Section 8-25-5. Port Fleeger had a rig up for No. 8, SE cor. Section 19-25-5. The Blue Stem Oil Co. was spudding in No. 3 McLean, CNL SE SW, Section 5-27-6. The Phillips Petroleum Co. had a rig up for No. 1, NW cor. Lot 14, Section 18-25-14.

Elk County

The Empire Gas Fuel Co.'s No. 2, NE cor. NW NW, Section 13-29-8, Elk County, was shot with 130 quarts at 2,004-38 feet, and was good for 120 bbls. The Ohio Fuel Co.'s No. 1 Ford, C SW NW, Section 22-29-9, was shut in for 4,000,000 feet of gas at 1,430-40 feet. The Watchorn Oil & Gas Co.'s No. 3 Denton, CWL NE NW, Section 3-30-9, was making 130 bbls. after a 60-quart shot in sand at 2,242-64 feet. The Imperial Drilling Co.'s No. 1-A Woods, NW cor. NE, Section 10-30-9, was shot with 40 quarts at 2,303-23 feet, and was good for 30 bbls. Crawford & Ragan's No. 1 Osborn, NW cor. SE, Section 5-31-11, was dry and abandoned at 1,930 feet.

The Watchorn Oil & Gas Co.'s No. 2 Denton, NW cor. NE NW, Section 3-30-9, was drilling at 2,620 feet. Anderson and others' No. 2 Hand, NE cor. SE, Section 21-31-9, was drilling at 300 feet. The Clark Oil Co.'s No. 2 Lawyer, C NE SE, Section 35-30-9, was drilling at [illegible] feet. The Producers & Refiners Corp.'s No. 1 Williams, SW cor. NW, Section 36-30-9, was drilling at 980 feet. The Home Oil Co.'s No. 1 Sellars, C SE SE, Section 11-31-9, was drilling at 1,450 feet. The Pure Oil Co.'s No. 1 Walker, NW cor. SW NW, Section 13-31-10, was drilling at 1,130 feet. The Southwestern Gas Co.'s No. 3 Webb, SE cor. SW NE, Section 14-31-10, was drilling at 1,000 feet. John Croft and others' No. 1 Ames, NE cor. SE, Section 15-31-10, was drilling at 445 feet.

Hamilton County

The Wood Oil Co.'s No. 1, NW cor.

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PARMACO DOUBLE GLAND STUFFING BOX CASING HEADS

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PARKERSBURG W. VA.

Section 5-26-41w, in Hamilton County, was drilling at 4,265 feet.

Clark County

The Watchorn Oil & Gas Co.'s No. 1, SE cor. NE NE, Section 20-32-21w, in Clark County, had a show of oil at 5,025 feet, and was underreaming 5⅛-inch casing with total depth of 5,160 feet.

Lyon County

The McMan Oil Co. had a rig up for No. 1, SW cor. SE, Section 29-21-12, Lyon County. Lamdon and others had a rig up for No. 1 NW cor. SW SW, Section 32-21-12.

Reno County

The Reno Oil Co.'s No. 1 Short, NW cor. NE, Section 13-23-8w, in Reno County, had a show of oil at 3,708 feet, and was abandoned at 3,732 feet.

Lincoln County

The Amerada Petroleum Corp.'s No. 1 Crawford, C SW SE, Section 16-11-7w, Lincoln County, was dry and abandoned at 3,505 feet.

Chase County

The Phillips Petroleum Co.'s No. 1, Irwin, NW cor. SW, Section 1-22-8, in Chase County, was drilling at 3,077 feet.

Coffey County

Braden Bros.' No. 1 Byer, SE cor. SW, Section 13-22-13, topped lime at 1,783 feet, and had the Wilcox sand at 2,196 feet with a small show of oil and was abandoned with a hole full of water at 2,199 feet.

MEXICAN FIELDS

(Continued from Page 43)

No. 2, Lot G, quitting a dry hole at 2,300 feet, and Mexican Gulf Oil Co.'s No. 19, Lot 4, is the same at 2,335 feet. National Lines, in its Chapacao right of way, has a duster in its No. 9 at 2,360 feet.

South of Topila, Cortez Oil Corp. abandoned No. 1, Lot 8 Cahuayotes for a dry hole at 3,440 feet. In the Marland Field, southwest of Ebano, Cia. Pet. Franco Espanola, abandoned No. 22 Limon at 2,460 feet, where a flow of sulphur water was encountered.

In the South Fields, Huasteca Petroleum Co.'s Nos. 34 and 36 Tierra Blanca are both salt water wells at sub-sea levels of 2,102 and 2,173 feet respectively.

In the Fields

Drilling operations as the week ended are best reflected as follows: In the Cacalilao sector of the northern fields, La Corona Petroleum Co.'s No. 165, Lot 4, is in gray lime at 1,760 feet; No. 169 same lot is rigging, and No. 151, Lot 1 is changing to cable tools at 1,910 feet, gray lime. International Petroleum Co.'s operations in Lot 5; No. 148 is in white lime at 2,250 feet; No. 151 is in gray lime at 1,970 feet; Nos. 154 and 155 are drilling in San Felipe at 1,495 and 1,734 feet respectively; No. 159 is in gray lime at 1,680 feet; No. 160 is in gray shale at 575 feet; No. 161, 163 and 164 have cemented 8-inch in the San Felipe at 1,200 and 1,203 feet respectively; No. 165 is running 8-inch at 1,205 feet; No. 167 is in gray shale at 985 feet; No. 168 cemented 6-inch in the San Felipe at 1,273 feet; No. 169 is rigged and No. 171, Lot 3, is in shale at 505 feet; Mexican Sinclair Petroleum Corp's. No. 93, Lot 3 is in blue shale at 515 feet; No. 94, same, has cemented 8-inch at 1,220 feet in the San Felipe; No. 110, Lot 1, is in lime at 2,130 feet, and No. 112 is in lime at 1,930 feet. Mexican Atlas Petroleum Corp.'s No. 14, Lot 1, is in gray lime at 2,000 feet. Transcontinental Petroleum Co.'s operations in Lot 4; No. 113 is in San Felipe at 1,400 feet; No. 140 isi n gray lime at 1,600 feet; No. 152 is in lime with a showing at 1,940 feet; No. 158 will run 10-inch at 1,250 feet, San Felipe; No. 165 cemented 10-inch in the San Felipe at 1,400 feet; No. 140 is in ning 8-inch in the San Felipe at 1,265 feet. In Lot 5, Transcontinental's No. 156 is running 10-inch in the San Felipe at 1,250 feet, and No. 161 is in lime at 1,930 feet. New England Fuel Oil Co.'s No. 6, Lot 3, Cacalilao is in the Tamasopa at 1,880 feet.

Panuco

In the older Panuco sectors drilling operations were as follows: East Coast Oil Co.'s No. 436 Ingenio cemented 8-inch in shale and shell at 1,240 feet; No. 446, same, is in gray and brown lime at 1,800 feet, and No. 447 is rigging. Ita Mex Oil Co.'s No. 1, Lot 14 Lomas y Llanos is in brown lime at 2,100 feet, gassing and showing oil. Mexican Sinclair Petroleum Corp.'s No. 7 Tananturo cemented 8-inch in gray lime at 1,266 feet, and No. 8 there is in gray lime at 1,520 feet. Mexican Atlas Petroleum Corp.'s No. 6 Palangana cemented 8-inch in the San Felipe at 1,630 feet. National Oil Co.'s No. 13 Chijoles is drilling at 450 feet in shale; No. 15, same, is preparing to set casing at around 1,650 feet in San Felipe, and No. 18 is rigging. The Texas Co.'s No. 6, Lot 17 Isleta is in gray and brown lime at 2,183 feet, and it is rigging for No. 9 Cicero and has a derrick up there for No. 10. Transcontinental Petroleum Co.'s No. 19 Barbarena is fishing at 1,480 feet.

South Fields

In the South Fields, Huasteca Petroleum Co., (Mexican Petroleum), is drilling in brown lime, with excellent showings, at 1,793 feet in its No. 54-A Cerro Azul, which should be drilled in any day now. In its No. 55 it is in gray shale at 1,760 feet; No. 58 is in the same formation at 975 feet, as is No. 59 at 410 feet. In Chapopote Nunez, No. 10 is in brown shale at 1,220 feet. In Tres Hermanos, No. 9 is in gray shale at 1,080 feet, and No. 1 Grandilla is in a sticky gray shale at 3,916 feet. Mexican Eagle Oil Co.'s No. 44, Lot 125 Amatlan is drilled 1,845 feet in gray shale, being shut down temporarily. In Cerro Veijo, No. 20 developed a 600-bbl. showing at 1,200 feet, with the drill now 1,273 feet in basalt, and it is running 10-inch. This much showing at this depth is most unusual in the south fields. In Mecapepec, down in the Furbero country, its No. 2 is drilling in hard shale and shells at 2,785 feet. Mexican Gulf Oil Co.'s No. 39, Lot 146 Amatlan is drilling in gray lime at 1,850 feet. Cortez Oil Corp.'s No. 8 Aguada is in gray shale at 3,716 feet.

Miscellaneous Northern

The most interesting test among the northern fields miscellaneous at this writing is Leonard and others' No. 1 Garruche-Corcovado, which is making hole slowly around 1,780 feet, with oil slipping over. This test is just a little north by west from La Corona's sensational strike there of a few weeks ago. Other Corcovado tests are drilling as follows: Comas Oil Co.'s No. 1, Lot D is in gray shale at 770 feet; No. 7, Lot G cemented 8-inch in the San Felipe at 1,180 feet; No. 9, same, is drilling in gray lime at 1,400 feet, and gassing considerably; No. 14 cemented 8-inch in the San Felipe at 1,080 feet; No. 20 has spudded; No. 30 is in shale at 80 feet, and No. 31 is spudding. Mexican Sinclair Petroleum Co.'s No. 2 Garruche Corcovado cemented 8-inch in the San Felipe at 1,234 feet. Mexican Gulf Oil Co.'s operations in Lot 4 there follow: No. 8 is in gray and brown lime at 1,755 feet; No. 14 is a deep hole in white lime at 2,635 feet; No. 20 is in gray lime at 1,450 feet; No. 25 is in shale at 290 feet, and No. 1 Chapacaco, a border well, cemented 8-inch in gray lime at 1,232 feet.

At Ebano, Mexican Petroleum Co.'s No. 39 La Dicha is bailing at 2,085 feet; No. 54 is in gray lime with the hole full of oil at 1,935 feet; No. 10 Chapacao is ready to spud; No. 14 is in white lime at 1,930 feet; No. 18 is in gray lime at 2,125 feet; No. 19 has shut down for orders at 2,275 feet; No. 3 San Pedro cemented 8-inch in gray lime at 1,285 feet.

National Lines, on its Chapacao right-of-way, No. 7 is drilling in Tamasopa at 2,308 feet, too deep for much hope; No. 11 is in the Tamasopa with a showing of oil at 2,180 feet, and No. 12 is spudding.

In the Marland Field, Cia. Pet. Franco Espanola's No. 23 Limon is drilling in gray shale at 760 feet, and No. 25 cemented 8-inch at 1,205 feet in gray lime.

At Topila, Mexican Fuel Co.'s No. 17 Santa Fe is in gray lime at 2,025 feet, and No. 19 is spudding.

At El Barco, Mexican Gulf Oil Co.'s No. 67 is in gray and brown lime at 1,700 feet, and No. 68 is in shale and shell at 1,335 feet.

At Caracol, Venable and others' No. 10 is rigging, and No. 25 is cementing 8-inch around 1,654 feet in the Las Felipe.

CALIFORNIA RECIPTS AND PETROLEUM IMPORTS

Receipts of California crude and refined oils at Atlantic and Gulf Coast ports for the week ended March 14 totaled 330,000 bbls., a daily average of 47,143 bbls., against 488,000 bbls., a daily average of 69,714 bbls. for the week ended March 7.

	Week Ended Mar. 14
At Atlantic Coast Ports	
Baltimore	110,000
Boston	76,000
New York	144,000
Total	330,000
Daily average	47,143
At Gulf Coast Ports	
Total Atlantic and Gulf Coast Ports	330,000
Daily Average	47,143

According to figures collected by the American Petroleum Iistitute imports of crude and refined oils at the principal ports for the week anded March 14, totaled 1,646,000 bbls., a daily average of 235,143 bbls., compared with 1,498,000 bbls., a daily average of 214,000 bbls. for the week ended March 7.

	Week Ended Mar. 14
At Atlantic Ports	
Baltimore	65,000
Boston	63,000
New York	395,000
Philadelphia	65,000
Others	272,000
Total	860,000
Daily average	122,714
At Gulf Coast Ports	
Galveston district	130,000
New Orleans and Baton Rouge	504,000
Port Arthur and Sabine district	56,000
Tampa	96,000
Total	786,000
Daily average	112,429
Total All U. S. Ports	
Total	1,646,000
Daily Average	235,143

REAGAN COUNTY LINE NOW BEING COMPLETED

SAN ANGELO, Tex., March 21.—With four ditching and four pipe laying gangs rushing completion of its pipe line from San Angelo to Comyn, Comanche County, the Humble Pipe Line Co. is making water tests of its completed line from Kemper to San Angelo. At the same time, the South Texas Lumber Co. is building a total of 20 houses for pipe line employes at Kemper, San Angelo, Ballinger and May. These houses will cost $50,000 to $60,000.

The last connection in the 67-mile line from the Reagan County field to San Angelo was made last week on the ranch of J. D. Sugg, in Irion County and the crew was transferred to Valera, from which point it is working west to meet the gang that has put over 20 miles of pipe underground. Other crews are working east from Coleman and west from De Leon. The Humble's private telephoe system along the pipe line, with stations every 15 miles, will be completed probably this week between Kemper and San Angelo.

The Humble originally intended to ship oil from San Angelo to the Gulf in tank cars over the Santa Fe when the first link in its pipe line from Kemper to San Angelo was completed. But now no oil runs will be made until the 128-mile extension to Comyn is finished. Connection will be made at Comyn with a Humble main line to the coast. The 8-inch line will have a daily capacity of 20,000 bbls.

The first pumping station, at Kemper, is ready for operation. Machinery has been set and the building to house it is under construction at the station on the Estes farm, 3 miles northwest of this city.

MRS. DELIA DRAPER DIES

CHATHAM, Ont., March 21.—The death occured recently at Petrolia, Ont. of Mrs. Delia Draper, mother of Truman Draper, assistant manager of the western production department of Imperial Oil, Ltd, at Calgary.

KANSAS ONLY MID-CONTINENT STATE TO SHOW AN INCREASE

Kansas was the only division in the Mid-Continent Field to show an increase in production in February over that of January. The combined North and Central Texas fields fell off quite materially, while Oklahoma, North Louisiana and Arkansas had a lesser reduction in output.

Production in the Rainbow Bend Pool in Cowley County was largely responsible for the increase of 6,777 bbls. a day in the average production of Kansas in February over that of January. The total production for the month of 28 days was 2,466,660 bbls., or an average of 88,095 bbls. per day, while in January, 31 days, it was 2,520,858 bbls. or 81,318 bbls. per day. Greenwood County's production is getting closer to the total in Butler County as the time goes on, the older field settling down slowly but steadily, while the younger Greenwood Field is gaining a little as the drill extends the various pools in that county. Cowley County is the best looking prospect in the State at this time and is expected to show further increase in output before it begins to settle back.

Oklahoma in February fell off slightly in daily output as compared with January. Burbank, Bristow, Cushing-Shamrock, Tonkawa, Healdton and Hewitt among the most important pools suffered a loss in production while Papoose and Cromwell, and Otoe or Watchorn showed gains. The Davenport Pool in Lincoln County and the Masham Pool in Pawnee County were added in February.

The big slump in production in the Wortham Pool, which fell off from 113,336 bbls. a day in January to 72,964 bbls. a day in February was in the main responsible for the falling off in the production of the combined North and Central Texas area. East Central Texas dropped from 204,956 bbls. a day in January to 160,622 bbls. in February. The combined fields including North Texas, Central Texas, Panhandle and East Central Texas declined from 333,595 bbls. a day to 295,950 bbls., or an average drop of 37,645 bbls. a day. In North Texas, Burkburnett came back into the major pool class with an average of 15,149 bbls. and Archer County averaged 41,218 bbls. a day, a gain of about 5,000 bbls. a day. Reagan County, in the Central Texas division, fell off from 13,300 bbls. to 11,505 bbls. a day.

A slight loss was registered in the production of the North Louisiana fields for February as compared with January. The total for the month was 1,343,524 bbls. or an average of 47,983 bbls. per day, while in January the total of 1,519,434 bbls. averaged 49,014 bbls. per day, a difference of 1,031 bbls. per day.

In Arkansas February production figures showed a drop of 831 bbls. a day from the average for January which was 104,913 bbls., revised figures. February's average daily output wac 103,082 bbls.

KANSAS

Daily Average and Monthly Production in February, 1925

	Daily	Monthly
Marion County:		
Florence	1,309	36,652
Peabody	2,450	68,600
Covert-Sellers	964	26,992
Total	4,723	132,244
Butler County:		
Elbing	3,131	87,668
Potwin	456	12,768
Cameron-Robinson	650	18,200
Wilson-Dunkle	1,817	50,876
Towanda	3,110	87,080
El Dorado	6,026	168,728
Fox-Bush	2,726	76,328
Nuttle-Koogler	1,466	41,048
Sluss	429	12,012
Blankenship	1,084	30,352
North Augusta	1,143	32,004
South Augusta	2,024	56,672
Smock	250	7,000
Douglas	176	4,928
Leon-Weaver	848	23,744
Total	25,236	709,408
Greenwood-Woodson:		
Virgil	4,751	133,028
Seeley	4,318	120,904
Thrall-Burkett	5,519	154,532
Sallyards	1,748	48,944
Polhamus	3,423	95,844
Teeter	4,125	115,500
Miscellaneous	189	5,292
Total	24,073	674,044
Cowley County:		
Rainbow-Bend	11,992	335,776
Slick-Graham	3,266	91,448
Rock (Twp. 30-4)	486	13,608
Clark (Twp. 31-3)	137	3,836
Eastman (Twps. 30-6, 31-6)	1,201	33,628
Winfield (Twps. 32-4, 32-5)	1,825	51,100
Miscellaneous	313	8,764
Total	19,220	538,160
Other Counties:		
Rice	71	1,988
Russell	1,313	36,764
Harvey	101	2,828
Chautauqua	2,556	71,568
Elk	841	23,548.
Wilson	301	8,428
Montgomery	4,011	112,308
Allen	1,326	37,128
Neosho	770	21,560
Lyon	87	2,436
Miami	591	16,548
Franklin	589	16,492
Douglass	44	1,232
Bourbon	42	1,176
Linn	436	12,208
Anderson	1,614	45,192
Labette	50	1,400
Total	14,743	412,804
Total February	88,095	2,466,660
Total January	81,318	2,520,858
Difference	6,777	53,198

OKLAHOMA

Daily Average and Monthly Production in February, 1925

	Daily	Monthly
Washington County	6,046	169,288
Nowata and Rogers	5,522	154,616
Osage and Eastern Kay Counties:		
Burbank	56,965	1,595,020
Osage, outside of Burbank	37,252	1,043,056
Total	94,217	2,638,076
Tulsa County:		
Bird Creek, Owasso, etc.	3,976	111,328
Red Fork, Sand Springs, Bruner, Turkey Mountain and Fisher	3,883	108,724
Bixby, Leonard and Jenks	1,806	50,568
Broken Arrow and Coweta*	1,340	37,520
Total	11,005	308,140
Okmulgee-Mukogee Counties:		
Mounds, Beggs, Hamilton Switch, Youngstown	12,022	336,616
Bald Hill and Haskell	2,131	59,668
Morris, Boynton and Cole	2,663	74,564
Okmulgee	2,559	71,652
Tiger Flats, Henryetta and Schulter	2,155	60,340
Total	21,530	602,840
Okfuskee, Seminole and Hughes Counties:		
Deaner-Lyons	4,592	128,576
Wewoka	10,211	285,908
Cromwell	37,486	1,049,608
Papoose-Gilcrease	36,507	1,022,196
Okemah	251	7,028
Weleetka	1,395	39,060
Wetumka	75	2,100
Total	90,517	2,534,476
Creek County:		
Cushing-Shamrock	22,983	643,524
Glenn Pool, Sapulpa and Kiefer	9,060	253,680
Bristow, Kelleyville and Depew	28,014	784,392
North Bristow (Twp. 17-8)	3,249	90,972
East Bristow or Slick	7,790	218,120
Total	71,096	1,990,688
Cleveland	3,168	88,704
Keystone	1,079	30,212
Jennings	5,853	163,884
Otoe or Watchorn	8,979	251,412
Masham	181	5,068
Total	19,260	539,280
Payne County:		
Yale, Quay and Ingalls	4,594	128,632
North Cushing or March Pool	1,256	35,168
Total	5,850	163,800
Lincoln County:		
Stroud	4,093	114,604
Davenport	1,250	35,000
Kendrick	36	1,008
Total	5,379	150,612
Kay Grant and Noble Counties:		
Blackwell	2,420	67,760
Deer Creek	106	2,968
Ponca City	963	26,964
Mervine	448	12,544
Braman	2,412	67,536
Hubbard	526	14,728
Thomas	190	5,320
Tonkawa	91,216	2,554,048
Billings	481	13,468
Total	98,762	2,765,336
Garfield County:		
Garber	4,699	131,572
Carter County:		
Healdton	15,199	425,572
Hewitt	15,843	443,604
Graham	10,197	285,516
Fox	2,275	63,700
Brock	1,566	43,848
Tussy or Sholem Alechem	1,949	54,572
Total	47,019	1,316,532
Stephens-Cotton Counties:		
Loco-Milroy	2,250	63,000
Comanche	663	18,564
Duncan	5,864	164,192
Walters	1,025	28,700
Kilgore	192	5,376
Total	9,994	279,832
Jefferson County:		
Hambro	425	11,900
Caddo County:		
Cement	1,705	47,740
Garvin County:		
Robberson	3,149	88,172
Beckham County:		
Sayre	175	4,900
Pontotoc County:		
Allen	268	7,504
Pottawatomie County:		
Maud	17	476
Total February	496,635	13,905,780
Total January	498,800	15,462,800
Difference	2,165	1,557,020

Note: County classification is not exact in some cases. Mounds district lies in three counties; Coweta in Waggoner County; part of Glenn Pool is in Tulsa County; part of Quay in Pawnee County; part of Stroud in Creek County; Milroy is in Carter County.

NORTH AND CENTRAL TEXAS

Average Daily and Monthly Production in February, 1925

North Texas—	Daily	Monthly
Burkburnett	15,149	424,172
Electra	17,238	482,664
Iowa Park-K.M.A.	3,989	111,692
Archer County (Holliday, etc.)	41,218	1,154,104
Clay County	445	12,460
South Vernon	4,957	138,796
Montague County	77	2,156
Total	83,073	2,326,044
Central Texas—		
Clear Fork	5,829	163,212
Breckenridge	8,354	233,912
Caddo	4,649	130,172
Gunsight	73	2,184
Ranger-Eastland	6,798	190,344
Rising Star	95	2,660
Sipe Springs	170	4,760
Desdemona	2,718	76,104
Pioneer	1,004	28,112
Brown County	948	26,544
Callahan County	3,195	89,460
Coleman County	60	1,680
Jack County	47	1,316
Palo Pinto County	117	3,276
Shackelford County	2,853	79,884
Reagan County	11,505	322,140
Mitchell County	1,617	45,276
Total	50,037	1,401,036
Panhandle—		
Carson County	1,829	51,212
Hutchinson County	286	8,008
Wheeler County	103	2,884
Total	2,218	62,104
East Central Texas:		
Mexia	21,933	614,124
Powell	55,870	1,564,360
Carrie	1,567	43,876
Richland	8,288	232,064
Wortham	72,964	2,042,992
Total	160,622	4,497,416
Total all fields Feb.	295,950	8,286,600
Total all fields Jan.	333,595	10,341,445
Difference	37,645	2,054,845

NORTH LOUISIANA

Daily average and total monthly production for February, 1925.

Field—	Daily Av. Prodn. Barrels	Monthly Prodn. Barrels
Bellevue	3,879	108,612
Caddo, light	9,174	256,872
Caddo, heavy	2,555	71,540
Cotton Valley	6,988	195,664
De Soto-Red River	3,321	109,788
Elm Grove	679	19,012
Haynesville	14,006	392,168
Homer	6,781	189,868
Total February	47,983	1,343,524
Total January	49,014	1,519,434
Difference	1,031	175,910

ARKANSAS

Daily average and total monthly production for February, 1925.

Field—	Daily Av. Prodn. Barrels	Monthly Prodn. Barrels
El Dorado	8,553	239,484
Nevada County	1,520	42,560
Smackover, light	32,757	917,196
Smackover, heavy	58,236	1,630,608
Stephens	2,016	56,448
Total February	103,082	2,886,296
Total January	104,913	3,252,303
Difference	831	366,007

ARTHUR W. LEWIS DIES

PITTSBURGH, Pa., March 21.—Arthur W. Lewis died suddenly at the home of his brother-in-law, James W. Brown, at McKeesport, Pa. Mr. Lewis was born in Wisconsin in 1853 and came to the oil regions when a young man and for many years was associated with the late T. N. Barnsdall. Shortly after the death of Mr. Barnsdall, Mr. Lewis retired and resided at Geneva, Ohio. Mr. Lewis had many friends in the Pennsylvania, West Virginia and Ohio oil fields For a time he resided in Bradford, Pa.

DIED IN PERU

CHATHAM, Ont., March 21.—Word has been received in Petrolia, Ont., of the of the death at Lobitos, Peru, of James P. Booth. Mr. Booth, who was employed by the International Petroleum Co. in the Peruvian fields, has been for many years drilling in various foreign fields. He leaves a wife, now in Ireland, one daughter in Germany, and two sons, Ernest in Venezuela, and Edward, in Peru.

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High Pressure Governors for Manufactured Gas

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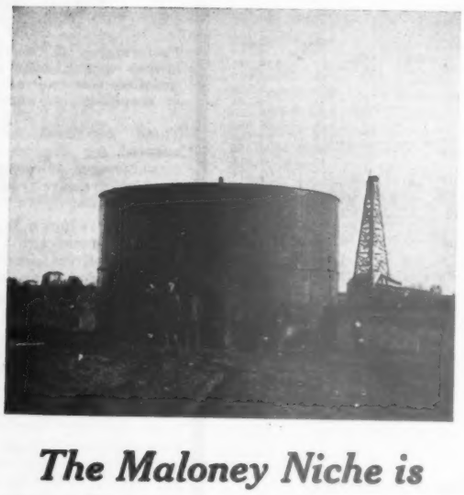

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"ALONE"

NORTH CENTRAL TEXAS PRODUCTION IN 1925 MAY EXCEED THAT OF 1924

By George R. Kelley

FORT WORTH, Tex., March 23.—With production in the North Central Texas oil territory gradually but substantially advancing and the prospects for a much larger production from some of the newer pools, indications at the present moment are that the territory will show a much larger production in 1925 than it did last year. During the week ended March 14, last, crude oil production advanced to a total daily average for the entire territory of 143,545 bbls., the highest daily average attained in more than a year. The highest average for any one month during 1924 was during May when daily production was 128,490 bbls.

Taking the new and the near new fields into consideration it would be dangerous to even hazard a guess at the peak of production in North Central Texas for this year. Already, it might be said, South Archer, North Young, Wilbarger and Reagan Counties have pushed the average daily production of the district to a point 15,000 bbls. higher in daily average than it reached at any time last year.

It is hardly safe to say that any of the areas mentioned here have been anything like fully developed. Even Archer County in which development work has been carried further than in any other of the areas, may yet develop a new peak in daily production. North Young County and Wilbarger County are most certainly just on the first lap of their field development and Reagan County has scarcely left the post, with a daily output averaging 13,100 bbls., daily at the present time. Then there are several other producing districts, whether they prove to be large or small, are to be reckoned with. The Texas Panhandle has some wonderful possibilities with production already developed in Carson Hutchinson, Wheeler and Gray Counties. There are yet undeveloped possibilities in Mitchell County which now has a daily production of approximately 1,650 bbls. Montague County is also a new district that has recently made itself a place in the production columns of the North Central Texas territory and which during the year may develop something very interesting.

Being Developed Rapidly

Circumstances point to a rather rapid development in most of these new and prospective oil areas. In the first place the recent advances in the price of crude oil are making for more development everywhere and then in most of these north Texas areas the producing sands are found at comparatively shallow depths ranging from approximately 900 feet in Montague County to slightly below 3,000 feet in the Texas Panhandle. In South Archer and North Young the sands are from 1,000 to 1,200 feet in depth; in Wilbarger County they are from 1,300 to 2,200 feet, while in Reagan County the producing formation is a shade deeper than 2,800 feet.

A year ago Archer County had a daily production of about 27,180 bbls., as compared with its present daily output of approximately 43,000 bbls. A year ago Reagan County had a daily production of only 175 bbls., whereas today it is producing more than 15,000 bbls. The Texas Panhandle did not make itself a place in the production columns until in May of last year and the South Vernon Pool in Wilbarger County was not conspiciously mentioned in the production figures until in September and October of last year. Today the daily output of the Panhandle is rapidly approaching the 2,500-bbl. mark and Wilbarger County's daily output is more than 5,300 bbls.

Of the present prospective new fields in this territory, Wilbarger County, Reagan County and the Panhandle probably offer the greatest possibilities. Developments have progressed further in South Archer and North Young Counties, so that oil men have a fairly good idea of what to expect there. But it is different in some of the other fields.

Reagan County a Factor

At the present time Reagan County offers the greatest increase in production. The Humble pipe line from the Reagan County Field to San Angelo has been completed and is now ready to start running crude from the field. There is probably 25 wells now being drilled in the Big Lake Field most of which are within the proven area and the others being located in semiproven territory. This, of course, does not take into consideration a large number of rank wildcats that are being drilled in Reagan and adjoining counties. Most of these inside wells can be completed within the next 30 days to six weeks and naturally give promise of greatly increased production from this area.

Developments in the Panhandle are less certain than in Reagan County. Development has been going on in the Panhandle for many years but operators have been rewarded largely with heavy gas production rather than with oil. There is a certain section in the Panhandle probably 75 miles in length east and west and 15 miles in width in which gas production seems almost assured. Drillers are continually battling heavy gas pressures in an effort to get down to the oil-bearing formations. The best opinion seems to be that somewhere in the Panhandle there is a tremendously large oil field, but the difficulty is in finding it.

Production in that area is from a formation classified as granite wash. Some wells already completed there have started off with large production but have invariably declined rapidly. One well that had an initial output of more than 2,000 bbls. was down to 600 bbls. in less than 30 days. Another well brought in about three weeks ago with an initial output of 500 bbls. is now credited with a daily production of 75 bbls.

Again should big production suddenly develop in the Panhandle district producers would be up against the problem of getting their oil moved out. At present the field has a 6-inch line running to Amarillo and a 4-inch line to the town of Panhandle, adequate of course to handle more than the present output of the field. However, with largely increased output the field would be forced to make hurried connections with some trunk line in order to clear the field.

In other Sections

As yet very little of importance has been developed in the Nocona district of northern Montague County. Production there, according to the latest reports, is slightly more than 100 bbls. daily, which is run through a four-inch line of the Prairie Pipe Line Co. to a connection north of the Red River in Oklahoma. The oil produced is of low specific gravity and has failed so far to attract very many operators. There is, however, some possibilities existing in this territory that might add considerably to the production figures of north Texas before the end of the present year.

Mitchell County has been producing oil for the past two years or more, though at present the daily output is only slightly more than 1,600 bbls. There is a small refining plant at Colorado which utilizes a part of the daily production of this field and the remainder is shipped out in tank cars. Judging from the development that has taken place in this field during the past two years, it is not likely that Mitchell County will experience any great increase in production unless considerable more drilling is to be done there than is indicated at the present time.

Production is found in a sandy formation at just below 2,900 feet. The wells usually have a flush production of 50 to as high as 200 bbls. daily and the wells are fairly stable in their output. With only scattering wells being brought in now and then the production of the field

has been maintained for a year now at around 1,200 to 1,500 bbls.

At present Mitchell County is about the northern extremity of the big development campaign that is going on along the Marathon Fold and which extends southwest through the Reagan County district and on into Pecos County. This roughly defined district has some tremendous possibilities. Operators believe that there will be oil pools discovered all along this great fault area and that it will eventually become one of the large producing districts of the Mid-Continent country.

GASO GIVEN ORDER FOR 50 MOTOR DRIVEN PUMPS

The Gaso Pump & Burner Manufacturing Co. of Tulsa, manufacturer of pipe line, refinery and field pumps, known as Gaso Pumps, has just received an order to furnish the Midwest Refining Co., of Wyoming, 50 units of 4-inch by 10-inch Duplex Geared Pumps to be driven by motor. This is in connection with the Midwest Refining Co.'s electrification process in its Wyoming operations.

The Gaso Pump & Manufacturing Co. has gone into the motorizing of its products on a large scale recently, having furnished all the suction pumps on the line of the Manhattan Pipe Line Co. of Kansas City, and is now completing the last of 12 large units for the Humble Pipe Line Co. for use in Texas. It also furnished motorized pumps to the Mutual Oil Co., Shaffer Oil & Refining Co. and Pierce Petroleum Co.

The officials of the Gaso company consider the placing of this order with them a great recommendation for Gaso Pumps, as all the companies manufacturing pumping equipment in the United States were invited to place bids for the order.

BRITISH CONTROLLED OIL FIELDS

CHATHAM, Ont., March 21.—The first annual financial statement of the British Controlled Oil Fields, Ltd., as a producing company has just been made public at Montreal. E. P. Andrae, managing director, sums up the report as follows:

"The profit and loss account issued with the balance sheets shows a balance from production account of $901,889 Shipments of oil commenced on December 25, 1923, so that revenue from the sale of crude oil credited to the production account has only been obtained during the last seven months of the financial year. A profit of $589,878 is shown on the sale of the company's investment in the V. O. C. Holding Co., Ltd. Interest, discounts, etc., produced $46,380. Against these credit items the development and administration expenses for the 12 months, August 1, 1923 to July, 1924, leaving a credit balance of $90,244.

KANSAS GASOLINE TAX

TOPEKA, Kans., March 23.—Seth Wells, who becomes oil inspector next month and will have charge of the collection of the gasoline tax levy by the Legislature, has had a conference with representatives of the oil companies relative to the methods of collecting the tax. The companies are to pay the tax on the gross shipments of gasoline to each filling station, less 3 per cent for leakage and evaporation. The filling stations are to collect the 2-cent tax from each customer as it is purchased. The tax must be paid on every gallon. Tax paid by farmers for gasoline to be used in tractors and stationary engines will be refunded upon application to the County Commissioners.

W. C. TEAGLE GOES ABROAD

W. C. Teagle, president of the Standard Oil Co. of New Jersey, sailed for Europe on the Leviathan on March 21. The company said that Mr. Teagle will inspect its foreign properties. He is accompanied by D. L. Harper, who has been with the foreign marketing department for a number of years.

Regulation of Fire Protection in the Petroleum Industry

The American Petroleum Institute addresses a letter to the petroleum industry calling its attention to a conference to be held under the auspices of the Institute at the Congress Hotel, Chicago, Thursday and Friday, April 9 and 10.

The purpose of the conference is to analyze and discuss proposed recommendations for the regulation of certain phases of the oil business which the National Fire Protection Association contemplates making to regulatory agencies. and which include:

1. Minimum distances between above ground oil storage tanks. An arbitrary table which specifies the distance, shell to shell, and shell to property line for tanks containing gasoline, refined oil, fuel oil and crude oil, is now contained in the report of the N. F. P. A. committee on laws and ordinances—a suggested model ordinance regulating the use, handling, storage and sale of flammable liquids and the products thereof.

2. "Tentative Regulations for the Safeguarding of Automobile Oil Tank Trucks Against the Fire Hazard and Loading and Unloading Operations in Connection Therewith." prepared by the conference committee on tank trucks of the N. F. P. A. committee on flammable liquids, the draft of which has been submitted (in advance of consideration by the association) for criticism by affected industries. Copies of these tentatively drawn regulations are now available.

A special subcommittee of the Institute's committee' on fire prevention and protection—Harry L. Shoemaker, Standard Oil Co. of New Jersey; Frank A. Epps, of the Tide-Water Oil Co., and Ralph J. Reed, Union Oil Co. of California—has been engaged in collecting and analyzing the industry's present practice of tank spacing and its tank fire record covering the past 10 years. This committee's report and the recommendations of our committee on fire prevention and protection will be submitted to the conference for discussion and approval. It will relate, specifically, to the controversy which has arisen over storage tank spacing and distance tables. An arbitration or conference committee, composed of representatives appointed by the American Petroleum Institute, the National Board of Fire Underwriters, the Bureau of Explosives, the Associated Factory Mutual Fire Insurance Cos., and the International Fire Chiefs Association, appointed to settle the controversy, provided there is unanimity of agreement, is awaiting the result of this conference before taking action.

"Definite action on Item 1, listed above, will be taken by the National Fire Protection Association at its annual meeting in May," the Institute's letter says, "hence the necessity for calling the Chicago conference, April 9 and 10, and the desirability of interested oil companies sending authorized representatives to take part, in order that the industry's spokesman may have beforehand the agreed composite view of the industry."

W. M. HANIFAN DEAD

TOLEDO, Ohio, March 21.—M. W. Hanifan, veteran employe of the Buckeye Pipe Line Co. is dead in his 77th year. He entered the employe of the National Transit Co., 54 years ago and was soon given a position as oil gauger and continued in that capacity around Oil City, Titusville and Troutman, Pa., until 1888, when the company transferred him to the oil fields at North Baltimore, Wood County, Ohio, where he became identified with the Buckeye Pipe Line Co. He was appointed assistant district foreman to Martin Moran, and later assistant to I. F. June. In 1890 he was promoted to district foreman and moved his family to Bowling Green, Ohio, where he continued to make his home until his death, retiring from active service 7 years ago.

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The U. S. Reclamation Service, the U. S. Forestry Service, and Bureau of Public Roads use Keystone for culverts and flumes.

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Prominent septic tank and vault makers use Keystone for greater durability.

Successful engineers, contractors, and builders use Keystone for greater rust-resistance.

Leading burial vault and casket manufacturers use Keystone because it assures increased permanence underground.

Keystone demonstrated its excellence in the service tests of the American Society for Testing Materials.

Users everywhere favor Keystone for purposes demanding reliability and lasting service. Send for booklets.

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LEASES—PRODUCTION

COLORADO OIL LEASE

$2 per acre; must act quick. Box 321, Rocky Ford, Colo.

TEN THOUSAND acres for test well in Township 19 north, Range 9 west, in northwest Kingfisher County. Address Howard L. Jones, secretary, Hennessey, Okla.

FOR SALE

Sixty barrels Pennsylvania settled fourth sand oil per month. Room for additional production if drilled. Priced to sell, $7,500.00. For information, write Box 173, Clarion, Pa

FOR SALE

Twelve hundred acres oil and gas leases in Jackson County, Tennessee, near the Finsley Bottom Field. No rentals due until February 1926. Will sell reasonable if taken at once. Write W. H. Boswell, Livingston, Tenn.

FOR SALE—Royalty in north end of Cromwell Pool, 27-11-8 Seminole County, Oklahoma. Address A. H. Gurley, Barnard, Kans.

COWLEY COUNTY ACREAGE

For sale, oil and gas leases among large company's holdings and three drilling blocks. Box 347, Winfield, Kans.

HENDERSON COUNTY leases and royalty; north of Bazette. Write for map. Frank Poorman, 3215½ Ross Ave., Dallas, Tex.

TOW CREEK Anticline, Routt County, Colo.; will make drilling agreement on most desirable leases on structure. F. 330 U. S. Bank Bldg., Denver, Colo.

WILL GIVE 5,000 acres solid for test well, southwest corner Township 1 north. Range 15 west. Well defined structure. Form 88; 5-year leases. Want immediate action; leases turned to you when spud in. John C. Gillam, phone M-6236, 314 Harrison Ave., Oklahoma City, Okla.

HAVE 12,000 acres oil lease in Old Mexico near Borden 13,000. 9,000 on Isthmus, need financing to drill. Believe oil is there. Splendid proposition given. Am experienced driller. 330 Mt. Ida St., Hot Springs, Ark.

I HAVE 50 acres of land in Stephens County, Texas; Section 6, called Blind Eastland Lands. Will lease for oil; give me an offer. Emma Seedig, Route 3, Chelsea, Okla.

LEASES on structure in Mississippi. On extension of Cincinnati uplift.

Fine proposition for any one wanting to wildcat. Am an experienced oil man and had competent geologist to look over this section before leasing. Cheap drilling.

Write me and see what I offer. Box 161, Durant, Miss.

GREENWOOD COUNTY, Kansas. Real oil field. Drilling contracts to let on two blocks of acreage, of 1,500 acres each, or sell; both blocks are on good structural, anticline formation. Write, wire or come and see. G. T. Kinsey, leases in bank, at Eureka, Kans.

OIL PRODUCTION FOR SALE

300 acres with nine thoroughly settled wells producing 35 to 40 barrels daily in Pike County, Indiana. Many fine locations to drill. Oil selling to the Ohio Oil Co. at $2.12 per barrel. Also complete string of Standard tools. Property in excellent condition.

P. E. TICHENOR
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Evansville, Ind.

OIL LANDS

Best, biggest and cheapest oil proposition in state of Arkansas, on the new Edenburg dome, semi-proven, where first wells will be producers; five proven sands; going 3,200 feet driller swears at 3,120 feet he went through 150 feet of the most likely sand he ever saw, also says he could get gusher at 1,756 feet. I can furnish you five or ten thousand acres. If you mean business wire D. B. Pate, Hornbeck, La.

LEASES—PRODUCTION

OIL LEASE—827 acres, five-year 88 form Live Oak County, Texas. Close to production. Drilling on three sides on structure. Price for quick sale $5.00 per acre. For map and full particulars address Gulf Leasing Co., 525 Brady Bldg., San Antonio, Tex.

OIL AND GAS LEASES
On Marathon Fold

18,000 acres, University permits, dated October 1, 1924, joining University permits of Sun Oil Co. and Gulf Production Co. Transcontinental now drilling and three more wells to start. Price reasonable.

20,000 acres 10-year leases, Crockett County; large and small blocks adjoining best companies.

5,000 acres, 10-year leases; close to drilling wells; Upton County.

1,920 acres University permits, Reagan County; close to Big Lake Oil Co., and Texon Oil & Land Co. producing wells. Want drilling contract.

136,000 acres Pecos County, near blocks of Arkansas Fuel and Pittsburgh operators. Low in price. Will sell in blocks or arrange for wells. Will allow time for geological inspection.

3,000 acres 10-year lease. Upton County; near drilling well and joining leading company holdings. Prices and maps on request.

C. W. WEBSTER
17th Floor W. T. Waggoner Bldg.
Fort Worth, Texas
Reference: R. G. Dun & Co.

FOR OIL LEASES and royalties in Seminole and Pottawatomie Counties, Oklahoma, call, write or wire, I. H. Townsend, Konowa, Oklahoma.

FOR SALE or lease, 360 acres land in Greer County, Oklahoma, for actual oil production. Whole or part, write. Owner F. R. Jackson, 201 Foster Ave., Rockford, Ill.

A MERITORIOUS DEAL

$25,000.00 will buy one-half interest in a test well to be drilled to a depth of 3,500 feet and a one-half undivided interest in 1,000 acres of new 5-year commercial leases checkerboarded surrounding the well. The structure is one of the most pronounced undeveloped structures in Oklahoma. This proposition is in the hands of old time experienced operators who are thoroughly familiar with Oklahoma oil development and will bear strict investigation. Drilling must begin by May 1.

P. O. BOX 116
Oklahoma City, Okla.

5,000 ACRES—Five-year leases with small rental, some of it adjoining production, drilling wells and pipe line. Asphalt drive to and from leases. L. W. Preston, Glasgow, Barren County, Kentucky.

OIL LEASES—Nevada County, Arkansas; 1,200-foot shallow. Will assign to driller carrying one-eighth over-riding royalty. Box A-682, The Oil and Gas Journal, Tulsa, Okla.

14,000 ACRES oil land in the Uintah Basin, Utah, in proven oil shale district with promising outlook for oil development; all high class agricultural land that can be irrigated at a nominal cost. The building of the new railroad from Salt Lake to connect with the Moffat Road, permission to build which has been applied for to the Interstate Commerce Commission, will increase the value of the land to ten times what now will buy it. It must be sold immediately by order of Bank Examiner at $5 per acre, $25,000 cash required. Walter W. Olmsted, 314 Ideal Bldg., Denver, Colo.

LEASES—PRODUCTION

FOR PANHANDLE oil leases and drilling contracts write Dr. W. R. German, Canadian, Texas.

ACREAGE and drilling blocks in Kansas and Colorado. Communicate with E. E. Fackler, Manchester, Kans.

J. F. MARION COMPANY
Magnolia Building
Dallas, Texas
Buys and Sells
Texas Royalties
"Ask Us First"

NEW MEXICO Drilling Block. 2,500 acres solid in Bloomfield district near 82 gravity oil. Want responsible people to develop. Box A-644, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—At bargain prices, oil and gas leases, production and royalties in the Kentucky shallow fields. For full particulars and maps address W. P. Harley, Bowling Green, Ky.

GRADY COUNTY

Block ready for drilling contract. Over splendid structure. Quick action necessary. C. P. Chisholm, Marlow, Okla.

I HAVE acreage, 80 acres up, in vicinity of drilling wells; $1 to $2 per acre; 10-year leases, rental 25 cents.

DR. W. R. GERMAN
On the Ground On the Square
Canadian, Tex.

I HAVE several hundred acres of oil leases in Stephens, Arkansas, field, proven territory, that I want to get drilled for part of the acreage. Will make liberal offer to anyone having money to drill the acreage out. Address P. O. Box 323, Magnolia, Ark.

JUDIO DOME

The largest dome that has been mapped in the Cumberland County (Kentucky) Field. Have five leases, will sell three, will send map to buyers. Richardson & Goff, Columbia, Ky.

SAN JUAN BASIN, New Mexico, 2,500 acres in this high gravity shallow well field, for sale or lease. Edward C. Hall, P. O. Box 37, Sugar Land, Tex.

EXCEPTIONAL OPPORTUNITY

Account owner's serious injury, he is compelled to sell one-sixteenth interest in well now drilling at seventeen hundred feet and with two good showings already, and six hundred forty acres leased close by. Location on excellent structure, and map furnished on request. Well in Ellis County, Kansas. Also have fine drilling blocks on wonderful structures. Write or wire W. J. Madden, Hays, Kans.

SOUTHEST NEW MEXICO

Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves and Lea Counties. Particulars on request.

H. T. ORCUTT
816 Colcord Bldg. Oklahoma City, Okla.

FOR SALE—Pennsylvania oil productions, large and small producing leases, in Bradford Field. Roy E. Diament, 92 Main St., Bradford, Pa.

COKE COUNTY, Texas, is on the Marathon Fold, two wells drilling in county. For cheap leases write J. L. Tubb & Co., Robert Lee, Texas.

LEASES—PRODUCTION

WONDERFUL OPPORTUNITY IN

OIL ROYALTY

By a great stroke of good fortune I have secured a short time option on what I consider the cheapest, most promising and largest piece of royalty acreage, close in to new gusher field, in all oil history.

Too big for me to handle alone. This is your chance to get in on ground floor, if you are willing to take a small chance for enormous profit returns.

For maps and full particulars (or address) wire

P. M. CHILDRESS

Alice, Tex.

SOUTH DAKOTA will attract wildcatters this spring. State geologist mapped structure near Faith last fall, bulletin made public soon. 3,000 to 4,000 acres on top to reliable operator for test, lease owner retaining small royalty. Accredited geologists, reliable operators write, George O. King, Faith, S. D.

ROYALTY

"Buy from the owner"

Owner will sell one-half perpetual royalty on lands located in active territory, between two drilling wells. Twenty acres or more price $2.50 per acre. Terms if desired. Address "Owner," P. O. Box 1036, Fort Worth, Texas.

CLASSIFIED WANTS

INCORPORATIONS

INCORPORATE—DELAWARE Cost $67, up to $100,000 Authorized Capital. F. L. Mettler, 882 Market St., Wilmington, Del.

DELAWARE incorporator. Charters, fees small, forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

MAIL LISTS

MORE THAN 3,000 accurate listings. Never offered for sale. $100. Box A-648, The Oil and Gas Journal, Tulsa, Okla.

PATENTS

PATENT-SENSE—Free book for inventors seeking largest deserved profits. Write Lacey & Lacey, 718 F St., Washington, D. C. Established 1869.

TULSA REAL ESTATE

FOR SALE OR LEASE

Seven-room strictly modern home, Garage, grape vineyard, garden and chicken ranch. Two acres on 14th place pavement. Parties must be responsible. H. L. Curry, Shaffer Oil & Refining Co., Tulsa, Okla.

WAGGONER RANCH TO BE SCENE OF DRILLING

(Continued from Page 32)

the Red River and about a half dozen new locations have been made in Tillman County, Oklahoma. To the northwest of Vernon, operations are also approaching the Red River, about a half dozen locations or drilling contracts having been closed in that territory.

Most all the companies operating in Texas are represented in the new prospective territory in Wilbarger County. The Consolidated Oil Co. (formerly Knight & Hines) have five locations, Burton and Ruff of Fort Worth have four locations and the following companies have made from one to as high as three contracts for new wells: Magnolia Petroleum Co., Humble Oil & Refining Co., Gulf Production Co., Hoffer Oil Corp., The Texas Co., Petroleum Exploration Co., Schoonmaker and associates, Bridwell and Heydrick, Texhoma Oil & Refining Co., J. R. Brewer, Atlantic Oil Producing Co. and Massie and Featherstone.

Wildcats Started Activity

It is reported that the Atlantic Oil Producing Co. is negotiating for the purchase of the Sigler Oil Co. properties in Wilbarger County. The Sigler Oil Co. was the first company to discover oil south of the town of Vernon. Its first well was drilled in there in the spring of 1920 when a small boom was started, but which subsided as rapidly as it developed when a half dozen or more failures showed up around the new wildcat. The Sigler well was drilled on the Wharton land about 2½ miles south of the present production of the South Vernon Pool.

The wildcat well of Noble and others on the Waggoner ranch about 3 miles to the southeast of the old Sigler well is probably responsible for a great deal of the interest that is now being manifested in the area lying between Electra and South Vernon. The Noble well which came in a few weeks ago is now credited with a daily production of 125 bbls. of oil with a specific gravity ranging from 39 to 41 degrees. The Levy and others' well on the Waggoner ranch, 2½ miles east of the South Vernon Pool is also a fair producer and is playing no small part in directing the attention of oil operators to this district.

All this district is not expected to produce oil. It will present the usual number of disappointments, but the rewards of this wildcatting campaign are expected to be a series of pools extending from Electra at least as far west as the South Vernon. Oil operators really look for the production to be found in small pools and at comparatively shallow depths. To be exact they are looking in Wilbarger County for something like the Electra Pool, or something like the South Archer Pools which are so prolific at the present time.

TRADE COMMISSION BARRED FROM "FISHING"

(Continued from Page 21)

evidence, such as letters, telegrams and memoranda."

In the decision just handed down by the United States Supreme Court the powers of the Federal Trade Commission in the matter of search and seizure are sharply defined, the Court holding that the commission may not have access to the books of an individual corporation when investigating general conditions in a trade or industry, which was the case in the commission's inquisition into the oil business.

The decision was made in what are known as the Baltimore grain cases. The Court held that if an individual corporation is being proceeded against then the commission may make an examination of its books, but sweeping investigations based on information of persons not under charges is barred.

In 1921 and early in 1922, when there had been a sharp decline in the price of wheat, the Senate, by special resolution called upon the Federal Trade Commission to make an investigation of the grain market, foreign and domestic.

To carry out the direction of the Senate the commission undertook to examine the books of a large number of export companies, among them three Baltimore concerns.

These exporters refused to yield their books to the commission, which instituted proceedings in the District Court of Baltimore to compel the production of the facts called for and to test the power of the commission to exact information from any party having it which would throw light on a situation being investigated.

The commission demanded all books of account, balance sheets, profit and loss statements, quantities of grain purchased or handled and the value and the results of all sales for a given period.

Counsel for the companies contended, first, that the Federal Court had no jurisdiction in such a case; next, that the commission had no power to examine the books; third, that the companies were private concerns and finally, that unreasonable search and seizure was being attempted by a Governmental agency.

Sustained by the Court

The District Court sustained in the main the position taken by the three defendants, holding that the statute creating the Federal Trade Commission conferred no power upon that body to inspect and copy papers "when it has no reason to believe that any violation of the law has been committed:" that the efforts made to gain access to the books of the defendants constituted unreasonable search and seizure and the commission might inspect books and records of a private corporation "only when investigating the conduct of the particular corporation, but not when investigating general conditions in any trade or industry."

The Supreme Court announced that it affirmed the decision of the lower court in toto and did not find it worth while to express any detailed opinion of its own.

For the past four or five years the Federal Trade Commission has been involved in litigation as to its powers with interests which it has investigated or has undertaken to nvestigate. The grain investigation was halted when the dealers declined to reveal the facts about their business and went into court for support.

Meanwhile, the grain market situation has changed so radically that it is declared the information the Senate sought nearly 3 years ago would have little value even if all of it might now be demanded of the dealers by the commission.

Commission Changes Rules

WASHINGTON, D. C., March 21.—Radical changes in the procedure of the Federal Trade Commission in the execution of its functions have been announced after a reorganization conference under the control of the administration members which have been in the majority since the recent appointment and confirmation of William E. Humphrey of Washington to succeed Nelson B. Gaskill of New Jersey.

Carrying out the wishes of President Coolidge for drastic reforms in the interest of fairness to American business institutions, the majority members of the commission, Chairman Van Fleet and Commissioners Hunt and Humphrey, announced three important changes in proceedure against corporations complained of, to which the minority, Commissioners Huston Thompson and John F. Nugent, dissented.

No publication of complaints against corporations for violation of trade laws until the accused have been given time and opportunity to appear and show cause why complaints should not be lodged against them.

Adoption of a policy not to entertain proceedings of unfair practices in which the alleged violation is a private controversy redressable in the courts.

Determination to settle cases by stipulation, except when the public interest demands otherwise, the commission having decided that the law gives it discretion as to whether issuance of a formal complaint and trial are necessary.

For years the practice of the commission in giving publicity to complaints against individuals and corporations for violation of the unfair practices one has been regarded as a questionable one calculated to injure business reputations unjustly.

Most Complaints Unjustified

In a great majority of cases it has been found that complaints have not been justified and alleged offenders have been publicly branded before any opportunity was given to prove their innocence. The practice has resulted in widespread unfairness and the press has been appealed to on numerous occasions by innocent persons and corporations to set them right before the public when allegations published by the commission have been proved unfounded.

It has been the practice of the commission heretofore to give to the public a synopsis of every complaint immediately after it has been filed and before an accused has been given any opportunity to be heard. President Coolidge has regarded this as an injustice and had it in mind when he indicated a desire for reforms in the commission's procedure.

To Remodel Commission

That the petroleum industry should support actively the Wadsworth-Williams bill, which was introduced in the last session of Congress and which will, in substance, be up for action when the next regular session of Congress convenes in December, is the sentiment of some of the leading oil men. The measure would revise the method of procedure of the Federal Trade Commission and have it an organization of constructive activity, as was the original intention of the act. The bill was drawn by the American Grocery Specialties Association's counsel, Charles Wesley Dunn, and introduced in the last Congress by Senator Wadsworth of New York and Representative Williams of Michigan.

The measure was the result of many conferences among industrial leaders and is also favored by some of the trade commissioners. It has been and is widely studied by practically all business organizations of the country.

At a recent conference of prominent manufacturers and national association representatives, Mr. Dunn, outlining the bill, said the Federal Trade Commission had been intended principally as a fact-finding party but due to failure of the original act to define clearly its scope and the character of the acts to be performed the commission had adopted policies unduly punitive to business rather than corrective. The bill proposes primarily to change the commission's investigation into one of practices rather than against persons and to make procedure follow the lines of administrative hearings and adjudications rather than of formal complaint in the nature of prosecution.

President Coolidge has recommended to Congress revision of the procedure of the Federal Trade Commission to give more constructive purpose to the act. There is scarcely an industry that has not been affected by the drastic methods of the Federal Trade Commission.

Late Fields

(Continued from Page 30)

No. 1 Hiram Wells is shut down at 102 feet below the shale with no oil showing. It is said that it will be carried on down to at least 375 feet below the Cave in the immediate future.

In Allen County, four new completions are reported. In the Gainsville district M. W. Graham's No. 2 Straight made 3 bbls. at 480 feet; Rohn & Ogles' No. 15 J. L. Grubbs pumped 5 bbls. at 330 feet.

In the southwest end of Allen, Meredith and others' No. 6 V. A. Frost showed 10 bbls. when placed on power at 310 feet. The White Plains Oil & Gas Co. were forced to abandon No. 8 on the J. R. Hornbuckle after attempts to fish tools from the hole proved fruitless. Rig was moved to No. 9 location.

Petroleum Geologists Gathering in Wichita For Annual Session

The tenth annual meeting of the American Association of Petroleum Geologists, to be held in Wichita, Kan., this Thursday, Friday and Saturday is expected to be one of the largest in point of attendance in the history of the association because of the general interest in the oil future of Kansas and also because of the accessibility of Wichita. Special cars were chartered from Tulsa and Houston and geologists from New York to Los Angeles planned to attend.

The geology of Kansas naturally has been given precedence on the program, the Thursday morning technical session and most of the afternoon meeting on that day being devoted to the 13 papers dealing with the Sunflower State. Oklahoma, Texas, Arkansas and Louisiana are next on the program and the 26 papers on these States cover such timely and important subjects as the Papoose, Cromwell, Luling, Wortham and Big Lake Fields, Wilcox sand production in the Tonkawa Field, and geology and oil fields of Archer County, Texas.

The Rocky Mountain region, California and other States will be discussed Friday afternoon, and the Saturday morning session is to be devoted to foreign countries and to special technical problems, which will also last through the afternoon meeting.

Interspersed among these technical papers will be several field trips through the oil country around Wichita. The annual dinner will be held Friday night, followed by a dance. Special entertainment has been arranged for wives of the members.

Headquarters of the convention will be at the Hotel Lassen, Wichita, Kans.

RED RIVER OIL BIDS RECEIVED BY BUREAU

WASHINGTON, March 23.—Bids were opened Monday at the Interior Department for the purchase of oil and natural gasoline obtained from wells in the Red River bed in Oklahoma. The bids will be analyzed by the Bureau of Mines and the successful bidder announced later.

The Red River oil field is under Interior Department jurisdiction pending settlement of the rights of about 178 claimant contests for leases and permits valued at millions of dollars.

Daily production of crude oil from producing wells at present average about 650 bbls. and the natural gas amounts to about 16,000,000 feet per month.

The bidders include H. B. Bouer, Wichita Falls, Tex.; White Eagle Oil & Refining Co., Kansas City, Mo.; Dell Oil & Gas Co., Tulsa, Okla.; Tidal Western Oil Co., Tulsa, Okla., and the Omar Gasoline Co., Wichita Falls, Tex.

Oil Securities Share General Selling

Several Favorable Developments in the Financial Situation of Oil Companies. California Shipments Most Disturbing Factor

By N. O. Fanning
Room 543, No. 30 Church St., New York

NEW YORK, March 21.—Oil securities fell under heavy selling during the past week. General depression in the stock markets was the chief reason, without any special development occuring to indicate a turn for the worse in the business situation. In fact, several favorable developments took place in the financial situation as regards oil companies.

The Anglo-American Oil Co., a former Standard Oil subsidiary operating in Great Britain, intends to retire on April 1, next, the £2,312,600 balance of its original issue of £3,000,000 5-year 7½ per cent notes. This will entirely eliminate its bonded indebtedness. Redemption of the bonds is provided for out of accumulated reserves.

Advices from London state the company is in a favorable position because of its comparatively small overhead. Improvement in exchange rates assures profits on the basis of oil purchased when the pound was at $4.35 and makes possible payment of notes from treasury with a relatively small exchange loss.

The annual report of the Gulf Oil Corp. for 1924 shows a distinct improvement in net earnings compared with 1923. The report showed net income after all charges of $19,166,794, against $14,323,342 in 1923. Net for 1924 was equivalent to $4.40 per share on the $4,348,816 shares (par $25) outstanding, against $3.29 per share in 1923.

In the matter of oil trade developments, the chief disturbing factor was the prospect of a renewed flood of California oil in the market east of the Rocky Mountains. Continued improvement in prices is expected to depend upon the ability of the markets to absorb this oil together with larger imports that have been coming in from Mexico and South America.

Continental Oil Financing

The Continental Oil Co. plans the issuance of 300,000 shares of stock to be offered to shareholders at $15 per share. Proceeds of the sale will be used to partly cover capital expenditures, the balance coming from earnings. The market price of the shares now is approximately $25 per share.

Middle States Oil

William Shivers, chairman of the Middle States Oil Corp. stockholders' protective committee, has issued a letter to stockholders stating that an annual meeting will not be held at this time as the receivers do not feel the expense is a proper one for them to incur.

Mr. Shivers announces that the time within which stock may be deposited, without payment in addition to the present contribution of 5 cents per share, has been extended to April 18, 1925. He said the receivers expect to have a report of the company's condition ready about April 1; that the committee will arrange to furnish the information contained therein to all depositing stockholders.

California Petroleum

The annual report of the California Petroleum Corp. for the year ended December 31, 1924, shows net profit of $2,894,462 after depreciation, depletion, Federal taxes and sinking fund, equivalent to 9.86 per cent earned on the combined $29,332,100 common and preferred stocks. This compares with $6,104,498, or 20.37 per cent, on $29,966,931 combined stocks in 1923. After the common stock receives 7 per cent in dividends, both stocks share equally in any additional payments.

The consolidated income account for 1924 compares with 1923 as follows:

	1924	1923
Gross earnings	$17,680,521	$20,314,981
Operating expenses	7,363,900	6,400,655
Depreciation, depletion, etc.	5,896,562	*6,237,916
Tax reserves, etc.	350,000	775,000
Interest	592,628	186,619
Sinking fund	582,969	610,293
Net profit	$2,894,462	$6,104,498
Preferred dividends	836,787	863,550
Common dividends	1,216,390	1,216,390
Surplus	$841,285	$4,024,558

*Includes $3,076,031 for new wells.

The consolidated balance sheet of the California Petroleum Corp. and subsidiaries, as of December 31, 1924, compares as follows:

Assets

	1924	1923
Property account	*$48,830,697	*$45,904,531
Investments	153,250	100,000
Preferred stock retired	.....	453,983
Bond sinking fund	255,872	228,291
Cash	1,116,399	4,302,150
Accounts receivable	1,244,104	1,303,373
Oil inventories	2,873,497	2,432,185
Other inventories	1,458,802	2,650,994
Deferred charges	630,421	727,025
Total	$57,563,042	$58,161,532

Liabilities

Preferred stock	$11,955,100	$12,589,926
Common stock	†17,377,000	†17,377,005
Subs. cos. stock	13,351	35,579
Bonds	7,892,600	8,766,100
Accounts payable	997,961	$1,640,860
Dividends payable	207,814	213,875
Federal tax reserve, etc.	844,719	1,865,610
Appropriated surplus‡	3,196,374	2,613,406
Capital surplus	2,783,051	2,757,512
Unappropriated surplus	12,295,072	10,301,431
Total	$57,563,042	$58,161,532

*After reserve for depreciation and depletion.
†Par $25.
‡Includes notes payable.
§For redemption of preferred stock and bonds of subsidiaries.

National Transit

The report of the National Transit Co. for the year ended December 31, 1924, shows net profit of $774,740 after depreciation and taxes, equivalent to $1.52 per share earned on 509,000 shares (par $12.50) of capital stock. This compares with $2.01 per share in 1923.

The income account of the National Transit Co. for 1924 compares with 1923 as follows:

	1924	1923
*Net earnings	$774,740	$1,024,672
Dividends	763,500	1,018,000
Miscellaneous appropriations	1,735	733
Surplus	$9,505	$5,939

*After depreciation and taxes.

The balance sheet of the National Transit Co. as of December 31, 1924, compares with 1923 as follows:

Assets

	1924	1923
Plant	$8,460,252	$8,506,273
Other investments	9,000,755	8,031,721
Cash	572,003	646,221
Accounts receivable	1,597,591	2,287,510
Deferred assets	26,600	47,356
Unadjusted debit	5,413	6,903
Total	$19,662,615	$19,525,984

Liabilities

*Capital stock	$6,362,500	$6,362,500
Current liabilities	105,823	154,617
†Unadjusted credit	8,532,610	8,356,673
Surplus	4,661,682	4,652,176
Total	$19,662,615	$19,525,966

*Represented by 509,000 shares, par $12.50.
†Includes reserve for depreciation, insurance, taxes, etc.

Tide Water Oil

The Tide Water Oil Co. for the year ended December 31, 1924, shows net income of $3,898,413 after depreciation and depletion and Federal taxes, equivalent to $7.79 per share earned on $50,004,500 capital stock. This compares with $2,908,217 before Federal taxes, or $5.81 per share, earned on $49,996,800 stock in 1923.

Union Tank Car

The Union Tank Car Co. reports for the year ended December 31, 1924, net income of $3,229,870 after depreciation, Federal taxes and reserves for annuities. After payment of preferred dividends, the balance was equivalent to $13.19 per share earned on $18,115,000 common stock. This compares with net income of $4,108,339, or $18.14 per share, on $18,000,000 common stock in 1923.

Vacuum Oil

An increase of $4,089,720 for 1924 was reported by the Vacuum Oil Co., equivalent to $7.02 a $25 per share of $61,919,950 outstanding common, compared with $5.41 on $61,523,075 the previous year. Net profits last year were $17,403,834 after deductions, against $13,314,114 in 1923. Surplus at the end of the year was $44,109,335.

A decreased net profit was shown in 1924 by the Standard Oil Co. of Kentucky, according to its annual report. Earnings were $5,382,940 after Federal taxes, compared with $5,519,182 the previous year.

Following a net loss of $938,985 in 1923 the South Penn Oil Co. reports a net income of $1,527,468 after depreciation, taxes and depletion, equivalent to $7.63 a share on $20,000,000 outstanding capital stock. Profit and loss surplus as of December 31, 1924, is reported at $12,469,376. The company's gross business amounted to $13,508,804, a small increase over the previous year.

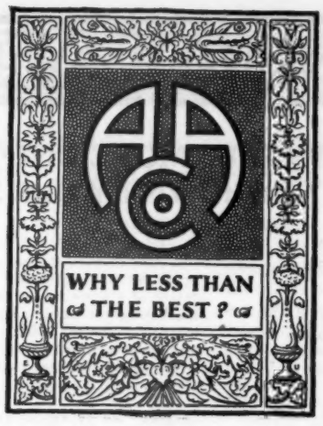
NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	§Dividends Rate	Clos. Mar.23	Quot. Mar.16	1925 High	1925 Low	1924 High	1924 Low	1923 High	1923 Low
American Republics	..	..	*50	*59	66¼	48	48	25	..	..
Associated Oil	25	6	32⅝	33½	39½	32⅝	34⅝	27⅝	29¼	29½
Atlantic Ref. com.	100	..	102⅝	107	117½	95½	140½	78½	160	98⅝
Barnsdall "A"	25	..	23¼	24⅝	28⅝	21½	22¼	14	35	9⅞
California Pet. com	25	‡	27⅝	28½	31½	23⅝	29	19⅞	28½	17½
Cosden & Co. com	..	..	27⅞	29⅝	35⅝	26¾	40¼	22⅝	62¼	23¾
General Am. Tank	..	‡3	46	48	58½	45¼	53	35½	71⅝	40
General Petroleum	25	8	49⅜	51	56¼	42	46	38⅝	..	..
Houston Oil	100	..	66⅛	70	85	66⅛	82½	61	78	40⅜
Independent Oil & Gas	..	†1	24	25½	30	13½	16¼	5⅜	11¼	3⅜
Indian Refining	10	..	6⅝	7	10⅝	5½	7	3⅝	8½	4
Louisiana Oil	50	..	16⅜	17⅝	23⅜	16⅜	..	..	..	..
Maracaibo	..	..	26½	27⅜	35½	26½	37½	25⅝	28¼	16
Marland	..	..	36¼	39⅝	46¼	36½	42	29	59⅝	18½
Mexican Seaboard	..	..	13	14⅛	22⅛	12⅜	25⅜	14⅛	19⅜	5⅜
National Suppy	50	6	62½	64	71	61⅜	72½	54	68	54
Pacific Oil	50	†2	53⅜	55⅜	65¼	53½	58¼	45	52½	31½
Pan American com.	100	12	77⅛	73¼	82⅜	65	65	44¼	93½	53
Phillips Petroleum	..	†2	37⅝	39⅝	46⅜	36⅝	42¼	28½	69⅝	19¾
Producers & Refiners	50	..	23¼	23⅝	32⅝	23¼	43½	29⅝	58¼	17½
Pure Oil com.	25	6	27	27½	33¾	26⅞	30¼	20	32	16½
Royal Dutch, N. Y. sh.	13.40	4.42½	50½	51¼	57⅜	51¼	59½	40⅜	55⅛	40½
Shell Transport	10	3.30	*40	*40	45⅜	41	42	33	41¼	29½
Shell Union com.	..	†1	23¼	24⅜	28⅜	22½	22½	15⅜	19¼	12⅜
Simms Petroleum	10	..	20¼	21¼	26¾	20¼	24	10⅜	16⅜	6½
Sinclair Consolidated com.	..	..	19	18⅝	24⅜	17	27½	15	39⅜	16
Skelly Oil	25	..	23½	25	30½	22⅜	29	17⅛	35	12¼
Standard of California	25	8	58⅞	59⅝	67¼	58⅞	68½	55½	64½	47½
Standard of N. J. com	25	4	40¼	41⅝	47½	40¼	42¼	33	44¼	30⅞
Superior Oil	6	..	4⅜	4½	6¼	4¼	8⅛	2⅝	6⅜	2
The Texas Co.	25	12	44¼	44⅝	49	42⅝	45⅝	37⅝	52⅜	34⅝
Texas Pacific Coal & Oil	10	..	15	14⅞	23⅜	11½	15¼	8¼	24⅝	5½
Tide Water Oil	100	4	130	134	149	129¼	151	116¼	144	94
Transcontinental	..	..	4⅛	4½	5¼	3⅝	5¼	3⅝	14½	1¼
Union Oil of California	25	7.2	37	38	43⅝	37⅛	39	35½	..	..
Union Tank com.	100	5	126	122½	127⅝	118½	132⅝	94	114	106
White Eagle Oil & Refining	..	2¼	26½	26⅞	31¾	21	29⅝	23¼	30⅜	20½
Standard Oil Stocks										
Anglo-American Oil	£1	25	20¼	20⅛	21	18	18¾	14⅜	19¾	13½
Borne Scrymser	100	12	*207	*214	240	225	264	150	153	110
Buckeye Pipe Line	50	14	63½	63½	72	62	85½	51	94	57½
Chesebrough Mfg. Co.	25	14	*53	*53½	70	48¼	52½	29¼	340	205
Crescent Pipe Line	25	..	*11	*12	15⅝	12⅜	20	11¼	25	15
Cumberland Pipe Line	100	12	*132½	135	150	128	148	109	117	80
Eureka Pipe Line	100	8	*81	83	96	83	105	74	117½	87
Galena Signal com.	100	4	*59¼	58	68½	56⅜	69⅜	52⅛	78	55
Humble Oil & Refining	25	4.8	43¾	45	47⅜	42¼	43⅜	36	41	28¼
Illinois Pipe Line	100	12	*142	142	164½	127	161	123	171	115
Imperial Oil, Ltd.	..	†2	27⅜	28½	34¼	28½	119	99	123	92
Indiana Pipe Line	50	8	73	75¼	84	73	100	66	103	81
International Pet. Co.	100	x50	23¼	24⅝	28⅝	23	24⅜	16⅜	24⅜	13¼
Magnolia Petroleum Co.	100	4.5	133½	140	159	135	162	124	166	123
National Transit	12.50	16	22⅜	23	25½	22⅜	26⅜	20⅝	29	19½
New York Transit	100	3	64½	69¼	75	64½	97	54½	138	70
Northern Pipe Line	100	6	*84	*84	88	80	107½	72	111	96
Ohio Oil Co.	25	8	64¼	68⅝	75¼	64	79½	53	85⅝	48⅜
Penn-Mex. Fuel	25	..	29	33	41¼	26⅝	45⅝	27	45	10½
Prairie Oil & Gas	25	†2	53	55¼	65½	53⅜	269	193	272	152
Prairie Pipe Line	100	8	115	119	126	106	111	100	117	93
Solar Refining Co.	100	15	220	*223	259	200	240	170	212	161
South Penn Oil	100	..	165	170	197	139	176	117	196	100
South West Pa. Line	100	4	65	*69	84	65	89	68	89	66
Southern Pipe Line	100	4	84	85	103	84	100	80½	116	87
Standard of Indiana	25	10	61⅝	62	70	61⅜	69⅝	54⅜	69⅞	48½
Standard of Kansas	25	..	33¼	36	46	33	50½	32⅜	56¼	36½
Standard of Kentucky	25	16	117¼	117¼	124½	117½	121½	101	109⅛	76
Standard of Nebraska	100	20	248	250	270	244	262	198	280	186
Standard of New York	25	5.6	42¼	42¼	48⅝	42½	48	*37⅜	49¾	35½
Standard of Ohio com.	100	10	347	350	369	338	377½	277	320	270
Swan & Finch com.	25	..	20	23	27	20	28	20	..	..
Vacuum Oil	25	†3.75	86⅜	89	96¼	80½	83¼	56½	85½	40
Washington Oil	10	..	x29	*30	30½	30	29	25	28	20¼
Miscellaneous Stocks										
Cities Service bks. sh.	‡	..	17⅞	18⅝	21	17⅜	19	13¼	18½	12⅝
Continental	10	10	25	25⅞	21¼	25½	..	..	..	..
Gulf Oil Corp. of Pa.	25	6	64½	65	71	64½	67⅜	56	68¼	45¾

*Bid, no sales. †In dollars. ‡Six per cent cash and 6 per cent scrip annually. §The figures in this column are kept up to date as far as possible, but are not guaranteed. xCents per share.

The Oil and as Journal's weekly average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Mar. 23	52.90	Feb. 16	55.96	Jan. 12	55.28
Mar. 16	54.14	Feb. 9	58.39	Jan. 5	53.01
Mar. 9	57.73	Feb. 2	59.24	Dec. 29	51.73
Mar. 2	59.56	Jan. 26	56.09	Dec. 22	50.76
Feb. 23	58.02	Jan. 19	54.58	Dec. 15	50.36



Meeting the Growing Needs of the Great Southwest

To meet the growing needs of all industries in the Southwest, an office has been established by The American Appraisal Company in the Mercantile Bank Building at Dallas, Texas.

The Dallas Office is one of twenty-two engaged in rendering the nation-wide service that has made An American Appraisal the Authority.

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Buffalo	Detroit	New Orleans	St. Louis	Appraisal Company, Ltd.
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REFINING AND MARKETING

DISCUSSION FEATURE OF N. P. M. A. PROGRAM

CHICAGO, March 21.—Open discussions of problems of the petroleum industry as they pertain to the marketing branch will make up the program of the National Petroleum Marketers' Association at its annual convention here April 7, 8 and 9. These discussions will take the place of set addresses of prominent men and industry leaders.

Decision to do away with regular addresses and open the convention to discussion came at the almost unanimous request of the members of the association who had been asked their preference in a questionnaire sent out several months ago.

Tentative subjects to be discussed at the convention include:

1. Is our industrial house in order?
2. Can we afford to give our business to refiners who are direct competitors as distributors?
3. Report on the collective buying department.
4. Gasoline taxes; are we for or against? What do they actually mean?
5. Giving away of pumps and other forms of buying business.
6. The collective national advertising program.

CONTINENTAL PLANNING MARKETING EXTENSION

DENVER, Colo., March 23.—Plans for the expenditure of $4,000,000 this year for new construction and extension of marketing operations have been announced by the Continental Oil Co. The announcement came in connection with the proposed sale of 300,000 shares of additional capital stock at $15 per share on the basis of 10 per cent of present holdings.

The sale of new stock, it was pointed out, will net the company $4,500,000 so that expansion plans will not affect the working capital so far as expenditures for the current year are concerned.

The Continental Oil Co. spent $7,000,000 on improvements and expansions during 1924, making a total expansion program for the two years of $11,000,000.

LOUISIANA GASOLINE PLANT

CAMDEN, Ark., March 21.—Erection of a casinghead plant at Louann in the Smackover extension has been started by the Skelly Oil Co., of Tulsa, Okla., according to E. J. Haslan of the company who has been here the past 30 days making contracts.

Skelly will spend approximately $500,000 on the plant, which will consist of sixteen units built in series for possible enlargement later. The plant will be in operation by July 1 and will have a capacity of more than 5,000,000 feet of gas daily.

TO ENLARGE REFINERY

TEXAS CITY, Texas, March 19.—Plans for the expenditure of $200,000 by the Pierce Oil Corp., in improving and enlarging its refinery here have been reported. During January the plant increased its output of lubricants from two to three tank cars a week.

JOINS MOORE ORGANIZATION

CHICAGO, March 21.—E. E. Ennis, one of the founders of the Ennis-Bayard Petroleum Co., and until recently head of the Ennis Petroleum Co., both of Chicago, has joined forces with the new Moore organization, the Lake Petroleum Co. The Chicago management now consists of Messrs. Moore, Ennis, Clater and Purcell, the latter being secretary and treasurer.

TENDENCY TOWARDS MORE UNIFORM GASOLINE SHOWN BY U. S. SURVEY

WASHINGTON, D. C., March 21.—The tendency toward more uniform gasoline in the United States is continuing with each semiannual survey of the Bureau of Mines, the survey of gasoline sold in January, 1925, which has just been announced, shows. The average end point of the January, 1925, survey was 424 degrees Fahrenheit as compared with 431 degrees in the January, 1924, survey.

The survey also showed that the average initial boiling point of the gasoline sold in January, 1925, was 94 degrees, which was almost identical with that of January, 1925, which was 96 degrees. The seasonal variation from summer to winter grades is not large, excepting for the initial boiling point, a comparison of the January, 1925, with the July, 1924, survey showed.

The survey is made by the Bureau of Mines from samples of gasoline obtained in various cities in all parts of the country, the choice of the cities being governed by their situation as the representative of a more or less definitely bounded marketing territory. Samples are taken on or about the 15th day of January and July each year.

In the following table, which shows the range of end points in each gasoline survey since April, 1917, the figures were obtained by averaging the end points of the least volitable and most volatile samples of gasoline. For example, of the 850 samples analyzed in 1919, the 10 per cent (85 samples) having the highest end points, and the 10 per cent having the lowest were averaged. These averages are represented in the table as the "maximum 10 per cent" and the "minimum 10 per cent," respectively:

	April 1917	April 1919	Jan. 1920	July 1920	Jan. 1921	July 1921	Jan. 1922	July 1922	Jan. 1923	July 1923	Jan. 1924	July 1924	Jan. 1925
Maximum 10%	449	472	432	502	467	473	461	461	451	471	460	457	452
Minimum 10%	334	363	377	406	382	398	397	401	397	400	392	396	401
Difference	115	109	105	96	85	75	64	60	54	71	68	61	51

District—	Spec. Grav.	A. P. I. Degrees	First Drop	20%	50%	90%	End Point	Aver. B. P.	Per Cent Recover'd
New York City	.743	58.8	93	202	277	383	428	273	96.3
Washington	.760	54.7	99	191	256	375	421	261	96.8
Pittsburgh	.733	61.5	94	181	250	384	424	257	95.3
Chicago	.752	56.6	101	199	270	393	430	273	96.0
New Orleans	.745	58.4	106	208	279	384	433	277	96.6
St. Louis	.744	58.7	92	198	273	388	430	272	96.2
Bartlesville	.737	60.5	89	187	271	391	435	269	95.8
Denver	.748	57.8	86	199	270	382	420	268	96.4
Laramie	.749	57.4	90	190	263	377	414	262	96.7
San Francisco	.748	57.7	98	194	254	368	417	258	96.2
Average	.746	58.2	95	195	266	382	425	267	96.2

In the following table the results of the survey of motor gasoline in 10 cities and the average are shown:

ADDRESSES ANNOUNCED FOR GASOLINE MEETING

Three additional addresses to be delivered at the annual convention of the Association of Natural Gasoline Manufacturers April 22 and 23 were announced during the past week by A. V. Bourque, secretary of the association. The convention will be held at the Mayo Hotel, Tulsa.

Emby Kaye, general superintendent of the gasoline department of the Skelly Oil Co., Tulsa, will address the convention on the subject, "Water Supply and Water Treatment." Mr. Kaye for several years has had charge of the construction and operations of natural gasoline department for the Skelly Oil Co., now one of the largest manufacturers in the United States.

H. L. Shoemaker, assistant chief engineer of the Standard Oil Co. of New Jersey will speak on "Fire Prevention." Mr. Shoemaker is a member of the subcommittee of the American Petroleum Institute which is conducting an investigation of fire hazards in the petroleum industry. He spoke at the recent annual meetings of the American Petroleum Institute and the Western Petroleum Refiners' Association.

D. F. Beaman, supervising engineer of the sales department of The Texas Co., Houston, Tex., will speak on the subject, "Plant Lubrication." Mr. Beaman is an authority on lubrication and his message will be of special interest to the natural gasoline fraternity.

TAX BILL FAILS OF VOTE

DES MOINES, Iowa, March 21.—Because of a dispute over where the fund should be placed, the bill to levy a tax on gasoline sales in the State failed to get a vote in the Iowa senate. The "progressives" wanted the present revenue reserved for the primary road system, while the other faction wanted to reduce the primary road fund below its present figure even after imposing a tax.

AVERT GASOLINE WAR

LOS ANGELES, Cal., March 23.—Forestalling an impending gasoline price "war," all marketing companies, which cut the price of gasoline at filling stations last week, have advanced their schedule to the price prevailing before the reduction. All companies have eliminated the special discount on coupon books, which precipitated the price disturbance. The only price now is 18½ cents, including the 2 cents State tax.

There has been a general downward revision of all gasolines and engine distillates. The natural gasoline, both absorption and compression grades, have not suffered uniformly as a result of the price cut. Most of the natural gasoline manufactured on the Pacific Coast is sold under relatively long term contracts and the prices stipulated in a great many of these contracts are on a sliding scale, varying with the Standard Oil Co.'s posted service station price. As the Standard's price has not changed, the natural gasoline sold under these particular contracts also has remained steady in price.

The kerosene market still is fairly active and the fuel market remains strong. Lubricating oils are maintaining the schedule of prices established last week although the volume of transactions is small.

NEW ILLINOIS MARKETER

The Blue & White Oil Co. has been incorporated at Minooka, Ill., for $50,000 to buy and sell petroleum products by John J. Coady, Robert Buddy and L. M. Hauser. Minooka is a few miles from Joilet and Chicago.

TAX EFFECTIVE APRIL 1

MADISON, Wis., March 23.—Providing a tax of 2 cents a gallon on all gasoline sales in the State, the Cashman bill, passed by the State Legislature and signed by Governor Blaine, will become effective April 1. The fund collected will be used for highway improvement.

OPERATION OF STILLS DISCUSSED BY N. P. A.

OIL CITY, Pa., March 21.—A thorough discussion of cracking stills and their operation occupied the regular meeting of the Oil City manufacturing section of the National Petroleum Association. D. J. Harvey of the Pennzoil Co., and M. J. Glynn of the Emlenton Refining Co., led the discussion.

The following makes of stills were discussed: Fleming, Snodgrass, Dubbs, Cross, Rittman, Stevens and Ramage. All makes were discussed from point of efficiency, per cent of gasoline produced, coke deposits, time of cycling, lost time, means of eliminating lost time, various troubles in operation and the method of effecting minor and major repairs.

Details of running stills and their safety were discussed. It was the opinion of several stillmen present that stills were perfectly safe so long as they were watched and care was used.

At the next meeting on April 16 the subject will be "Wax houses and their operation." It is planned to have an outside speaker at the meeting in preparation for the semi annual convention of the National Petroleum Association which will be held at Cambridge Springs on April 22 and 23.

WISCONSIN JOBBERS SEEK CHANGED TEST

MILWAUKEE, Wis., March 21.—Resolutions addressed to the State oil inspector protesting the proposed changes in the State inspection law were passed at a meeting of Wisconsin oil jobbers here. The proposed changes in the inspection law provide for the removal of gravity tests and the substitution of a distillation test. The jobbers say the changes would remove protection against inferior products.

The April meeting of the jobbers will be omitted as it would conflict with the convention of the National Petroleum Marketers' Association at Chicago April 7, 8 and 9. The next meeting will be held in May at Oshkosh, Wis.

TAKES OVER BUFFALO BUSINESS

BUFFALO, N. Y., March 21.—The Niagra Lubricant Co., of this city, has taken over the business of the Buffalo branch of the Empire Oil & Grease Co. and will handle Empire products in the Buffalo territory in the future. The Niagara Lubricant Co. is a well known local jobber of lubricating oils, soaps and greases. It has been in business several years. The members of the Niagara Lubricant Co. are Ferris Wentworth, who has been in the oil business for 15 years the most of that time with Swan & Finch, Joseph W. Wilson and Charles Sutton. Todd Glenn, the manager of the Buffalo branch of the Empire Oil & Grease Co., has been transferred to the main offices of that company in Oil City, Pa.

PLANTS START OPERATION

Phillips Petroleum Co. has started operation at its new natural gasoline plant in the Papoose Field and also has resumed operation of its gasoline plant at Burbank which was swept by an explosion and fire recently. The output of these two plants and of two plants recently purchased in the Breckenridge, Texas, district, is said to boost the total gasoline production by the company to 300,000 gallons daily.

GET POSTAL CONTRACT

CHICAGO, March 21.—Jewett & Sowers have been awarded the contract to furnish the Chicago postoffice with gasoline for three months beginning April. The price was not announced.

Progress in Natural Gasoline Plants

Change and Revision Predicted in Absorption Recovery. Central Power plant Design, Arrangement and Construction Discussed

By Frank P. Peterson

This is the third in a series of articles by Frank P. Peterson dealing with the general subject of "Rational Design and Arrangement of Natural Gasoline Plants." The first dealt with sites, published in The Oil and Gas Journal of February 19; the second, last week, with field development, flush production and equipment. Mr. Peterson is a veteran in the manufacture of natural gasoline and has been for years connected with the construction and operation of several of the largest and most efficient plants in the Mid-Continent.

As to stills, the conclusion might be hurriedly drawn that so much has been done in the diversified application of stills in the chemical industry that no new steps would be called for in still design. At least, the writer concludes that a selection of proper elements of still equipment could be made from the several branches of the industry in which stills have been so long used. But it is evident this has not yet been done, at least in any general way. Recent development of fractionating towers under the name of stabilizers brings out and emphasizes a condition new in the range of usage of large still design and application where low temperature ranges must be met and dealt with. The foregoing is an admission of the writer's conviction that still equipment for absorption recovery is yet to undergo change and revision to more perfectly adapted type for the purpose. Rightly, still design should be so modified as to develop within the still itself and its column or dephlegmator and condenser elements that degree of product control which is desired. This end should be so attained that a product control of maximum recovery and desired stability is at all times within the operator's hands, and this without reheating and rehandling plant output as it leaves or after it leaves the plant stills. And this in all probability is a near future development. Just a little keen attention to this important detail will embody as plant equipment and as an element of still and condenser construction the step in process now referred to as stabilization.

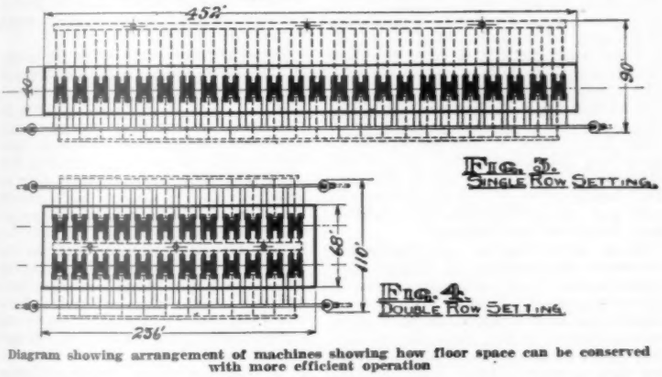


Diagram showing arrangement of machines showing how floor space can be conserved with more efficient operation

Problems somewhat similar have long since been met on large commercial scales in production and treatment of benzol, spirituous liquors, and aqua-ammonia. reference to the work of Dr. George Lunge, "Coal, Tar and Ammonia," will be of interest to those concerned with the more intricate details of development of stills for the special purpose involved. The work is in three volumes and matter of interest will be found in all three: At page 72 to 82 of part one, at page 922 to 935 of part two and page 1344 to 1408 of part three. Some excellent references will be found also in the pages cited to the work of others which the author (Dr. Lunge) had reviewed. The still element is second in importance to the machinery employed to handle the gas.

Heat exchangers may be treated as an element of the stills.

Absorber Equipment

Absorbers have been developed to a high degree of efficiency. The type is rather well defined and pretty much the same now. Shells of riveted steel have supplanted such other forms as were used in the early development, notably pipe of large diameter and some of the cast iron absorbers of the coke by-product industry for benzol recovery. This is one detail which would seem to offer opportunity for logical standardization in shells of 2 or 3 dimensions. The fillers of these absorbers, for diffusion and intermingling the oil and gas flownig through them is important. Various filler materials have been used: wood, slats, expanded metal lath, corrugated sheet iron, even tin cans. The most efficient filler to be found so far is one of specially cut steel shavings.

Some absorber ventures have been made along the lines of mechanical diffusion by sprays, or centrifugal force, of the oils of absorption. Aside from difficulty of sprays clogging in the former and the factors of power cost, maintenance and up-keep of seemingly unnecessary machinery in the latter, the effort to bring out mechanical absorber equipment is not to be criticised. One very novel and ingenious scheme of using the energy of flowing gas from the wells was developed to successful prorations by Bertch, now connected with the Cosden interests.

Oberfell and Allen, in a recent treatise on the subject of natural gasoline, cover the subject of absorbers rather comprehensively. The tendency in the writer's judgment will be rather toward the use of somewhat larger units of absorber equipment than early development employed. It has been found in practice that not so much is lost of efficiency in the absorber chamber due to channelling of gas flow as was feared. And since ratio of periphery of chamber wall to cross-sectional area is reduced by increase of diameter, the tendency to expand this dimension is well supported, since channelling would naturally be expected to seek wall lines where filler materials may not contact perfectly.

The body material of fillers may be made quite uniform. The resistance to gas passage may be kept uniform by the uniform distribution of the filler material. Up to such limits as are practical for field use and pressures, increases of unit sizes will also proportionally reduce the cost of absorber construction. Another very important detail of absorber provision is that of the circulation scheme. Due to temperature rise evolved in the reaction set up in absorber function of operation, it has become largely standardized practice to conduct the operation in two stages or phases. This calls for dual or double series absorbers, connecting lines and fittings and pumps. By such means, however, it becomes possible to remove the oil in circulation and intercool it and add thereby a material degree of saturation. This undoubtedly reduces materially the function of still work in the cycle of the oil, but, since with effective heat exchange applied in the cycle of operation still duty is not a large factor cost, the conclusion looking to discarding of second phase absorption is quite worthy of close attention.

Cooling Equipment

The most important function of operation is, of course, cooling. Since everything depends upon the effectiveness of this function of operation, no detail of efficiency should be overlooked in the provision of water supply and cooling equipment. The writer is willing to accept for his part any criticism which may arise as a consequence of his objection in no uncertain terms to be rather generally accepted and employed open aerial cooled coils. Further along, he will not hesitate to present a logical scheme in substitution. For the present it is sufficient to present those essentials of design and arrangement which should be sought for maximum efficiency in utilization of all that can be attained in temperature drop imparted to the gas and oil in normal plant control. Steady, uninterrupted flow of the water stream is indispensable to good regulation of operation. Good pumps, dependable power for driving them, elimination of traps or back-flow interruptions of the water streams and of any chance of contamination of the water with the oil of absorption or of lubrication are fundamental. Towers for cooling of the water to wet bulb range should be designed to function within their proper place and purpose. This cannot be done unless due regard is had for the proportion of cross sectional area of such towers to their height and other details. Towers of excellent design may be had from builders who are ready to guarantee performance, or they may be built to suit immediate and local requirements. In such fields, which unfortunately are few, as have a good supply of pure, free and cold water, the selection of tower cooling equipment will be materially modified to the extent of provision of only what is required of atmospheric cooling. This case presumes no recirculation of the water and that extent of cooling only which may be attained below atmospheric. And the few degrees obtainable are well worth the necessary investment.

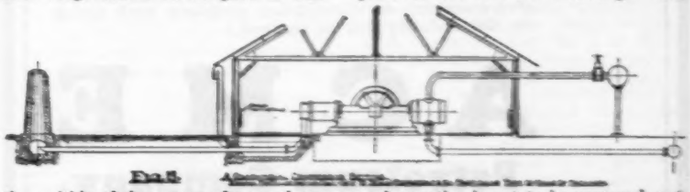


FIG. 5.

Power and Lighting

Power and lighting of large plants should almost invariably be derived from a plant designed for the purpose. If water conditions are favorable to boiler operation, steam engines of modern type should be used. The requirement will hardly be large enough to justify the use of turbines, and their operation requires a rather higher degree of skill than is usually employed. Gas engines of type suitable for either direct or belted drive are to be used wherever conditions do not favor dependability, and the choice of boiler equipment. Power units should be duplicated, with ample excess, for electrical drives of pumps and lighting. Not less than 25 per cent capacity in excess of that estimated as required should be installed, especially in the case of gas engine drive, since the fuel economy factor is not of first importance at least for several years of the life of installation, and the underloading, if it occurs for long, will not be any detriment; rathan an assurance of dependability. It is hardly necessary to say that alternating current must be used for motor drives, since these must be spark proof. Three phase alternators are probably the best selection of electrical generator equipment.

If direct connected generator drive is employed, reasonably high speed engines should be selected, both out of regard for reduced cost of the generatior equipment and for the reason that better governor control of engine speed is reasonably attainable. Some elegant lines are open here to the builders of light motor types of engines. Direct connected gas driven units of 60 to 75 KVA capacity should meet an ideal condition wherein from two to four units may be installed for operation in parallel. Two such units should take care of the smaller range of large plants while four should be sufficient for large development. Whatever provision may be made for plant lighting the electrical source should be 100 per cent dependable and fool proof. Such light type motors as are suggested may be started satisfactorily by storage batteries or by hand in emergency. They can be driven by either residue gas or gasoline. An installation of one unit only the type referred to but of 25 KW capacity only has now been in service for nearly six months as the sole dependence for lighting one large plant of the writer's knowledge. But such practice is not to be approved, notwithstanding the fact that no operation time has been lost to date on the failure of the lighting unit to perform its duty.

Many more general phases of arrangement of plant and its diversified equipment are worthy of treatment in the preliminary way in which major elements have been mentioned, and it is not intended to neglect even such matters as sanitation and personal welfare phases of development, but the more fascinating phases of the subject lie in the constructive field. We shall, therfore, hasten to that field of study, beginning with main power and compressor installation, which

(Continued on Page 180)

Need is the Forerunner of Service

With the growth of certain communities, a need exists for a general market where people can obtain certain supplies.

Likewise comes the need for a post office—for a hotel and a restaurant.

With machinery, came the need for lubricants—for oil. And with the automobile, came the need for a source of supply for oil. The filling station filled that need.

But then it became evident that the filling stations would have to carry different grades of oils coming from variously located refineries.

Hence came the immediate need for the oil jobber—for the ACME PETROLEUM CO.

If the refineries were to attempt to sell to all the individual filling stations in the country, their cost of doing business would easily double.

For the filling stations to buy direct from the refiners would mean the sending out of numerous small orders. Naturally it would be uncertain when these orders would be filled and business would become uncertain.

ACME eliminates all chance of such conditions existing. We buy oils from the various refiners and store it in our own storage tanks. The orders from filling stations are immediately filled by loading ACME Tank Cars.

The need for a "go-between" for the refineries and the filling stations is filled by ACME. Test this service—it pays.

(This is the twenty-fourth of a series of informatory advertisements on distribution problems with which the Oil Industry has to contend.)

ACME

Petroleum Company

Executive Offices: 624 S. Michigan Ave., Chicago

KANSAS CITY, MO. Land Bank Bldg. DALLAS, TEXAS Magnolia Bldg.

OIL STORAGE PLANTS

Over 7,000,000 Gallons Storage

West Tulsa, Okla. Blue Island, Ill.

(*Chicago Switching District*)

CHICAGO MARKET WEAK AND WAITING

Only Buying for Immediate Demands by Those Who Have No Storage. In Some Cases Buyers Asked to Name Own Price. Kerosene Weak and Prices Lower. Fuel Oil Easy. Gas Oil Holding Better. Lubs Unchanged

By J. B. Waldo

CHICAGO, March 23.—The reduction of the gasoline tank wagon prices along the Atlantic Coast came as a complete surprise to the majority of local oil men. The increases in the tank wagon scale had been much greater in the East than in the Standard of Indiana territory. One of the executives of the latter called attention to the fact that while the increase in this territory had been but five cents a gallon on gasoline, an advance justified by the increase in crude costs, the advance in the Atlantic Coast territory had been much greater, ranging, according to his figures, from seven to nine cents from the low point of the year. This is regarded as excessive and not justified by conditions. In fact when the advances were being made the remark was hazarded by this executive that they were going too fast for the prices to hold.

There has been a good deal of local criticism of the "small refiners" and some of the best posted have taken up arms in their behalf and said that in this case at least the small refiner had followed, not led, in the declines in refinery prices. It is pretty hard to say who is to blame, if any one, for the fact that gasoline has declined approximately 3 cents a gallon in only a little more than as many weeks. The present refinery prices are all out of line or else they have been too high. The thing to do is to get the prices back to some figure than is justified by conditions and hold them there. But if the old practice of "run and sell at the market" continues there will be tank wagon cuts and reduced margins as a permanent thing for this season.

In a great number of distributing points in this territory the present tank wagon market is 6½ cents above today's laid-down cost of gasoline. This is practically the same condition as resulted in cuts in prices to the consumer in over two thousand points in the territory during last summer. That condition was more demoralizing and worse for everybody in the business than if the scale had been generally lowered and fictitious profits eliminated. There was a tempting margin of profit on paper which did not exist because the selling price was cut and the politicians reaped the greater part of the benefit. If the refiner can get along and pay present prices for crude and make money with U. S. Motors gasoline selling at 10 cents or less at the refinery, then adjust the other prices that should depend on the refinery cost price of the product and have a settled market without cutting and rebating and the other evils that were so appalling last summer to all those who had the good of the industry at heart and who wished to continue in it as a part of a responsible and reasonable line of industrial endeavor.

The week opened with a somewhat demoralized market. The jobbers were not buying and gasoline was being offered freely at reduced quotations. What is more it was being pushed on buyers, some sellers practically asking marketers to name the price. When a possible buyer is asked to name a price he naturally names one that is low. Some of these low offers were accepted and that permitted the owner of this cheap gasoline to undersell his competitors.

Just at this writing there is a move to relieve the refiners of a considerable part of their load. It is figured the actual quantity that must be bought and stored for the coming season is not so great. Many of the refiners are already out of the market, having sold all they have to sell at present. Cosden, Roxana, Indian, Empire, Marland, Phillips and others are named as having no surplus and needing all they have in stock. The stocks of other refiners it is believed are not so large but that a comparatively little active buying will help matters immensely. One leading refiner has stated that with present prices for crude, a good profit can be made with U. S. Motors gasoline at 12 cents. This would call for a tank wagon scale right in line with the present prices. There are a great number of points where the freight is close to 2½ cents a gallon and the tank wagon price is 18½ cents. This allows the jobber 4 to 4½ cents margin which jobbers admit is fair and sufficient.

Right at this writing the demand from the jobbers is very light. They have heard news of what happened along the Atlantic and Gulf Coasts and they are waiting to see what is going to happen in this territory. There are nine out of ten who have very positive convictions the tank wagon market will be reduced 1 cent before the end of the week and their reasoning is along the line mentioned except they do not take into account any possible support to the market by the refiner distributors who would be justified in supplying their future wants if they can do so at the present market. Refiners claim it cost them from 1 to 2 cents a gallon more to produce the gasoline than the price at which it is offered today.

Some refiners are out of the market so far as quoting prices is concerned. Some say they are sold up but their price is 12 to 13 cents according to the concern. Others are offering Motors gasoline at 10½ cents for spot or fairly early shipment. A few are asking 10½ cents and some jobbers report they are being offered by refiners Motors gasoline at 10 cents. The prices quoted are not getting any real business. The only ones to buy are those who order because they must have the gasoline and have no storage. The larger companies are supplied and are keeping up their recent tactics of staying out of the market. There were a few sales reported by refiners of 60-62—400 at under 12 cents and of 64-66—375 at less than 13 cents. Other grades and gravities in proportion. The coming week is certain to be most interesting. The market may take an upturn in which case there will be a better business. If it continues to sag, it would seem the Standard could hardly fail to take cognizance of it in its prices at the tank wagon and filling station.

Kerosene is rather weak and prices are lower but there are a number of larger jobbing organizations stated about ready to place their contracts and spring orders and if these come through it is not impossible the market may show a greater activity and more strength. However, these companies have been about ready to move for several weeks and have managed to avoid doing so. The country roads are in very bad condition and as kerosene is a country product used very lightly in the larger cities, this condition is to be considered in the placing of business. It may delay the oorders but the spring buying has yet to be done. The present market is just about 4⅞ cents with some asking the half but not getting much business.

Fuel oil is easy in tone and yet the offerings are not as freely made as some might believe. Marketers with good selling connections are not always able to get all the oil they want just when they want it and at the price the consumers believe it should cost them. There is a lot of grief in the market, much of it of that nature that comes from falling prices. Consumers with contracts that have been glad to get any fairly satisfactory oil at their price all winter are now getting out their specifications and dusting them off for use and they can

file a claim or reject a tank with an abruptness that takes away the breath of the sources of supply. There are many large companies that are always fair and reasonable but there are others who find their orders are always avoided by some of the best sources of supply and it is for this very reason. The average orders are much smaller than is usually the case from the same organizations. There is also some unexpected competition developing from abroad. One reason for the decline in the demand for fuel oil is the very low price at which some grades of mine run coal can be had. The present spot fuel oil market is around $1.10 per barrel but some oil has been offered for delivery over 60 days at $1.05. There is little or no oil in transit and the bulk of the business is for early delivery.

Gas oil is holding its own a little better than fuel oil but the new business booked is only fair in amount. Prices are a little lower at the end of the week but there are some buying orders that may be placed although the purchasers may continue to follow the recent plan of buying for immediate needs only. The most common quotation for a gas oil with regular specifications is 3¼ cents and there is little if any difference made between a light and dark oil.

Road oils are quiet. The Mid-Continent refiners are offering very little and some of those that had large stocks to offer a year ago are not quoting this year. The contracts call for prices delivered and the short-haul refiners are the active bidders and getting what business is being placed. The market is around $1.35 Group 3 basis but some of the contracts are being taken at very close figures.

Lubricating oils continue firm and practically unchanged. There is still a very good demand from jobbers for spring supplies of motor and farm oils including tractor lubs of all kinds. Refiners report a good demand and state they are sold sufficiently ahead to insure them a steady output for some time to come. The export demand is stated to be rather quiet although there is a fairly steady outward movement on contracts.

Tank wagon markets are unchanged at this writing in the Standard of Indiana territory. There is every indication the Standard Co. does not plan to change its present quotations and the purchasing movement reported in which the Standard and other refiners are expected to participate will probably prevent any immediate change to lower levels. The danger is that the condition of last season may be repeated and only two things can prevent it and these are higher refinery costs or lower tank wagon scales. Certainly with present crude conditions the present scale to consumers is fair and the present refinery prices are not equitable to the refiners. Any movement that tends to make a price structure that will allow a reasonable profit to all concerned in the production, refining and transportation of the major petroleum products will help stabilize the market while unreasonably high as well as too low profits in any branch will only produce an unsettled market.

ARGENTINE REFINERY TO USE CRACKING UNITS

The M. W. Kellogg Co. of Jersey City, N. J., has started the construction of two Cross cracking units at the refinery which the Argentine Government is erecting at Buenos Aires. The units will be ready to operate when the refinery is completed next fall. Dr. J. L. Landaburu, chief chemist for the Government, has been in United States for several weeks inspecting the Cross units in operation at several plants.

The Oil and Gas Journal has been advised by G. N. Harcourt of The M. W. Kellogg Co. that in the article entitled "Cross Cracking Process Described" appearing in the February 26 issue, it should have stated that the distillation equipment used in connection with the Cross Process operates at a pressure of 5 to 10 pounds. The article gave different operating pressures.

REDUCTION IN EASTERN GASOLINE RESULT OF CALIFORNIA CONTRACTS

By N. O. Fanning

NEW YORK, March 23.—The feature of the eastern refined oil markets during the past week was a decline of 1 cent in the tank wagon price of gasoline affecting every State. The Standard Oil Co. of New Jersey cut the price March 19 and Standard of New York took action March 20. Prices are now 1 cent below the peak for the year.

The action of leading marketers on the Atlantic Seaboard in cutting the price is attributed to recent contracts made by them for California gasoline which, delivered here, will cost 1 cent per gallon less than that recently purchased in the Mid-Continent Field. Leading California refiners simultaneously cut gasoline prices a cent on the Pacific Coast, making the refinery price only 9½ cents for U. S. Navy.

Despite the downward tendency indicated by the drop of 1 cent per gallon, the trade does not look for further cuts at this time. It is pointed out that only by recent advances have California refiners been placed in the position of being able to compete in the eastern markets. Sharp reductions in the eastern market would therefore probably have the effect of cutting off Pacific Coast producers from competition here.

In the opinion of some oil men who are well informed of current market conditions the only development which could result in a drastic cut in the tank wagon market east of the Rockies is overproduction of crude in the Southwest. As matters stand now Mid-Continent refiners must pay such high prices for crude that they can scarcely make money at current prices for refined oil, let alone compete with California refiners who are shipping stuff East on a wholesale scale, and threatening still lower prices. If Mid-Continent refiners have to face this competition from the Pacific Coast, their only salvation lies in a reduction in the price of crude petroleum.

Consumption Lower

Consumption of gasoline on the Atlantic Coast is reported to be somewhat less than during previous weeks due to unfavorable weather conditions. The higher prices continue to restrict consumption somewhat also. Eastern refiners are still holding down their production schedules, due not only to the fact that they feel pretty well stocked with gasoline, but also that they are large buyers of finished gasoline on the Pacific Coast.

This is said to have resulted in reducing their runs of high grade oil because the California gasoline can be bought and imported more cheaply than it costs to bring in high-priced crude and produce the gasoline from it.

Unfortunately no immediate relief from California competition appears to be in sight because reports from the Pacific Coast tell of increasing production and stocks. It is possible that the drain on supplies by shipping refined oil through the Panama Canal will improve this situation, however.

Many eastern marketers who depend on Mid-Continent gasoline are understood to be asking concessions from refiners in that territory. Otherwise, they will either have to withdraw from the market or else sell at a loss, as the small fellow as a rule has not the facilities for procuring California gasoline.

Fear Chaotic Conditions

Continuance of competition with California gasoline, it is feared by some marketers, will mean dumping on Mid-Continent gasoline at a loss to Mid-Continent refiners, and also "price wars" in this big marketing territory. The trade had been led to believe that this year would not witness a recurrence of such conditions, but it looks as if the strife between the East and West in the gasoline market might be repeated once more, and as usual to the loss of the eastern gasoline producers.

Only the larger eastern refining companies who are well stocked with comparatively cheap crude and can produce gasoline at a minimum cost are able to meet such competition over a long period of time. This has been the experience of the past, at least.

Chaotic conditions in the gasoline market, as has been previously pointed out, gives the oil industry a "black eye" from the viewpoint of the driver of automobiles, who sees a different price sign on nearly every service station.

Leading oil men hope, therefore, that the present situation will straighten itself out in time to save the eastern markets to what should be, in the opinion of many, their rightful suppliers—the Mid-Continent and eastern refiners.

Kerosene Dull

Kerosene continues unchanged, with no feature. Stocks continue to pile up with the indication that further price cuts will come in the near future. Prime white can be procured at refineries in bulk as low as 6¼ cents per gallon, although little is being sold.

Gas oil is firm and unchanged. Diesel oil continues in very good demand and bunker oil consumption is good, but supplies are more than ample, with the probability that prices will be reduced in the near future.

Lubricants Changed

The domestic demand for lubricating oils is more than holding its own at the present time, especially for red and pale oils. Cylinder stocks, however, are not moving so freely, due to some decrease in automobile trade.

During the past week extra light filtered (600 steam refined) was cut ½ cent per gallon to 46 (in barrels). Light filtered was also reduced ½ cent and No. 5 bright stock was reduced 1½ cents to 49. On the other hand, No. 1 white neutral was advanced 1 cent to 44 while "25" and "28" pales were advanced a cent to 21½ and 17, respectively. Polar red oil, 295 viscosity was cut 1 cent, while No. 1 summer black, 895 specific gravity, was raised a cent to 20.

Wax Dull

The demand for paraffin wax fell off somewhat. Prices held firm and 130-132 a.m.p. advanced ⅛ cent per pound to 6¾ cents.

Export Market Mixed

The oil export movement was mixed. Lubricants moved abroad in large quantities, while the movement of gasoline and kerosene fell flat. Germany was one of the largest buyers of lubricating oils during the week, the same as the week before.

The movement of cased oil has fallen off considerably. In the fact during the past week only one important shipment of cased gasoline was reported, amounting to 32,375 cases to New Zealand.

The follows table shows principal exports of petroleum and petroleum products from New York reported during the past three weeks (figures in gallons unless otherwise stated in parentheses):

Item. How Shipped—	Week Ended Mar. 18	Mar. 11	Mar. 4
Gasoline:			
Bulk	.....	2,812,551	.....
Cases	323,750	1,274,050	1,422,500
Kerosene:			
Bulk	229,755	4,709,722	.....
Cases	1,243,100	3,821,410	1,895,480
Gas oil:			
Bulk	.....	217,094	.....
Lub. oil:			
Bulk	872,880	1,549,839	.....
Barrels	1,507,650	1,268,500	1,079,550
Cases	73,150	165,722	96,890
Lub. grease:			
Barrels (bbls.)	.....	1,115	525
Cases	.....	3,222	.....
Pet. asphalt:			
Barrels (bbls.)	.....	.....	1,217
Bulk (lbs.)	1,683,618	.....	.....
Paraffin wax:			
Bags (lbs.)	121,000	509,740	1,139,320
Barrels (bbls.)	.....	2,147	.....
Crude oil:			
Barrels (bbls.)	.....	6,775	2,240

One feature of the export market was the purchase by the Anglo-American Oil Co. of 1,683,618 pounds of petroleum asphalt in liquid form.

New fixtures in the tanker charter market were not so numerous. They included:

Tanker W. S. Porter (Am.), April May loading, gas oil, Houston to Messina, Italy, 30 shillings per ton.

Tanker Tamiahua (Am.), April loading, crude oil, Gulf port to New York, 32 cents.

Tanker Lingfield (Br.), Port Arthur to Australia, kerosene, 32 cents.

Oil Receipts Gain

Receipts of crude and refined oil by water at Atlantic Coast Ports during the past week averaged 540,000 bbls. daily, a gain of 207,000 bbls. over those of the preceding week. Receipts from the Gulf Coast increased 130,000 bbls., from the Pacific Coast 44,000 bbls. and imports accounted for 33,000 bbls. of the gain.

Receipts from the Pacific Coast were the largest in some weeks and consisted principally of gasoline and fuel oil.

The following table shows daily average receipts of crude and refined oil by water at Atlantic Coast ports from the Gulf and Pacific Coasts of the United States, and imports, for the last three weeks; also monthly record for the last 12 months (figures in barrels):

	Week Ended Mar. 18	Mar. 11	Mar. 4
Gulf Coast	286,000	156,000	316,000
Pacific Coast	116,000	71,000	23,000
Imports	133,000	106,000	167,000
Total	540,000	333,000	506,000

REFINED MARKET SLOW REPORT BY OIL CITY

OIL CITY, Pa., March 23.—The refined market in Northwestern Pennsylvania at the present time is extremely slow. Some concerns state that their inquiries during the week have been the smallest in years while all acknowledge that few orders have been received during the week.

Gasoline is very weak. The price has been declining for some time and it maintained its downward movement during the past week. The tankwagon reductions of gasoline in the Standard Oil Co. of New Jersey territory made the market structure for gasoline in this territory even weaker. There are some of the jobbers and refiners here who are of the opinion this tankwagon reduction was simply in the nature of a readjustment as the territory affected had obtained an increase some time ago which did not extend to the local area. However, the majority of the men engaged in this end of the business in this district are inclined to the belief that the reduction is merely the start of a general downward movement in the retail price structure.

Kerosene has been especially weak during the week. Fuel oil had a little spurt which lasted for a day or two but it soon subsided. Steam refined is off and the inquiries for it are very few. Neutrals are very slow. Wax is weak and slow.

OPEN OFFICES IN TULSA

Hughes & Co., Inc., of Chicago have opened a branch in Tulsa with offices on the fifth floor of the Cosden Building. F. J. Moore will have charge of the office. B. Blankenship, formerly employed by the Tulsa office of the Sinclair Refining Co., will be connected with the new office. The Hughes Co. markets gas oil, fuel oil and distillates.

Clive L. Alexander, consulting engineer, has also opened offices on the fifth floor of the Cosden Building. The offices are those recently vacated by the W. M. Welch Co.

NEW GAS COMPRESSORS

The Kansas Natural Gas Co. has announced that it has completed plans for the installation of two new double-acting compressors which will give an additional capacity of 2,070 horsepower in their compressor plant at Petrolia, Kans., at a cost of approximately $200,000.

The Petrolia station pumps gas to Kansas City, Topeka, Lawrence, Leavenworth and other towns on the main line system of the Kansas Natural Gas Co.

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Mar. 24		Mar. 17		Mar. 10	
OKLAHOMA (Group 3)—						
50-52 450 end point (Naphtha)	.09¾	.10	.10½	.10¾	.11¼	.11½
56-58 450 end point	.10	.10¼	.10¾	.11	.11½	.11¾
58-60 437 end point (U. S. Motor)	.10¼	.10½	.10¾	.11	.11¾	.12
60-62 400 end point	.12	.12¼	.13	.13¼	.13¼	.13¾
64-66 375 end point	.13	.13¼	.14	.14¼	.14¾	.15
68-70 350 end point	.13½	.13¾	.14½		.15¼	.15½
KANSAS—						
58-60 437 end point (U. S. Motor)	.10¼	.10¾	.11	.11¼	.12	.12¼
NORTH TEXAS—						
48-52 450 end point (Naphtha)	.09¾	.10	.10¼	.10½	.11	.11¼
50-52 440 end point (Naphtha)	.10	.10¼	.10½	.10¾	.11¼	.11½
56-58 450 end point	.09¾	.10	.10¾	.11	.11¾	.12
58-60 437 end point (U. S. Motor)	.10	.10¼	.10¾	.11	.12	.12¼
60-62 400 end point	.12	.12¼	.13	.13¼	.13½	.13¾
64-66 390 end point	.12½	.12¾	.13¾	.14	.14¾	.15
64-66 375 end point	.13	.13¼	.14		.15	.15¼
68-70 360 end point	.13¼	.13½	.14½	.14¾	.15¼	.15¾
NORTH LOUISIANA—						
56-58 450 end point	.10½	.10¾	.11½	.11¾	.11¾	.12
58-60 437 end point (U. S. Motor)	.11	.11¼	.11¾	.12	.12¾	.13
60-62 400 end point	.11½	.12	.13½	.13¾	.13¾	.14
64-66 390 end point	.13¼	.13¾	.14¾	.15	.15½	.15¾
64-66 375 end point	.14	.14¼	.15¼	.15½	.15¾	.16
ARKANSAS—						
58-60 450 end point	.11	.11¼	.11¼	.11½	.12	.12½
58-60 437 end point (U. S. Motor)	.11¼	.11½	.11¾	.12	.12½	.12¾
64-66 375 end point	.14	.14½	.14½	.14¾	.15½	.15¾
ROCKY MOUNTAIN STATES—						
*58-60 437 end point (U. S. Motor)	.13½	.13¾	.15	.15½	.15	.15½
PENNSYLVANIA—						
52 Naphtha	.13		.14½		.14	
54 Naphtha	.13		.13¾		.14¼	
56 Gasoline	.13¼		.14		.14½	
58 Gasoline	.13½		.14¼		.14¾	
60 Gasoline	.14½		.15		.15¼	
62 Gasoline	.15½		.15½		.16	
64 Gasoline	.15¾		.16		.16¼	
66 Gasoline	.16½		.17½		.18	
68-70 Gasoline	.18		.18½		.18½	
CALIFORNIA—						
54-56 437 end point (U. S. Motor) domestic	.10	.10½	.11	.11½	.11	.11½
CHICAGO DIST. (Based on Group 3)—						
50-52 450 end point (Naphtha)	.09½	.09¾	.11	.11¼	.11	.11½
56-58 450 end point	.09¾	.10	.11	.11¼	.11	.11½
58-60 437 end point (U. S. Motor)	.10½	.10¾	.11	.11½	.11½	.12
60-62 400 end point	.12	.12¼	.13	.13½	.13¾	.14
64-66 375 end point	.13	.13¼	.14	.14¼	.14½	.15
68-70 360 end point	.14	.14½	.14¾	.15¼	.15¼	.15¾

NATURAL GASOLINE

	Mar. 24		Mar. 17		Mar. 10	
OKLAHOMA (Group 3)—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.09¾	.10	.10¼	.10½	.11¼	.11½
Grade A, 72-79.9, 375 end point, rec. 90%	.09¾	.10	.10½		.11¼	.11½
Grade Double B, 84-92, 375 e.p., rec. 85%	.08¾	.09	.09¾	.10	.10¼	.10½
Grade B, 76-83.9, 375 end point, rec. 85%	.08¾	.09	.09¾	.10	.10¼	.10½
Grade C, 80-90, 375 end point, rec. 78%	.08		.09		.09¾	.10
NORTH TEXAS—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.09¼	.09¾	.10¼	.10½	.11¼	.11½
Grade A, 72-79.9, 375 end point, rec. 90%	.09½	.09¾	.10¼	.10½	.11¼	.11½
Grade Double B, 84-92, 375 e.p., rec. 85%	.08½	.09	.09¾	.10	.10¼	.10½
Grade B, 76-83.9, 375 end point, rec. 85%	.08½	.09	.09¾	.10	.10¼	.10½
Grade C, 80-90, 375 end point, rec. 78%	.08		.09		.09¾	.10
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 end point, rec. 90%	.10¾	.11	.11¾	.12	.12½	.12¾
Grade B, 76-83.9, 375 end point, rec. 85%	.09¾	.10	.10½	.10¾	.11½	.11¾
Grade C, 80-90, 375 end point, rec. 78%	.09¼	.09½	.10	.10¼	.10¾	.11
CALIFORNIA—						
68-80 absorption, 360-390 end point	.12½	13	.13	.13½	.13	.13½
78-84 compression, 350 end point	.12½		.13½		.13½	
CHICAGO DIST. (Based on Group 3)—						
Grade Double A, 80-87.9, 375 e.p., rec. 90%	.10¼	.10½	.10½	.10¾	.11½	.11¾
Grade A, 72-79.9, 375 end point, rec. 90%	.10¼		.10½	.10¾	.11½	.11¾
Grade Double B, 84-92, 375 e.p., rec. 85%	.09¼	.09½	.10	.10¼	.10½	.10¾
Grade B, 76-83.9, 375 end point, rec. 85%	.09¼		.10	.10¼	.10½	.10¾
Grade C, 80-90, 375 end point, rec. 78%	.08½	.08¾	.09	.09½	.10	.10¼

MOTOR NATURAL GASOLINE (BLENDS)

	Mar. 24	Mar. 17	Mar. 10
OKLAHOMA (Group 3)—			
60-62 450 end point	.10	.10½	.11¼ .11¾
64-66 437 end point	.10	.10½	.11½ .11¾
68-70 430-435 end point	.10	.10½	.11¼ .11¾
NORTH TEXAS—			
58-62 440 end point	.10	.10½	.11½ .11¾
58-60 450 end point	.10	.10½	.11½ .11¾
PENNSYLVANIA—			
*60-62	.13¾	.15	.15
*64-66	.13¾	.15	.15
*66-68	.13¾	.15¼	.15¼
*68-70	.13¾	.15¼	.15¼
CHICAGO DIST. (Based on Group 3)—			
60-62 450 end point	.10 .10¼	.10¼ .10½	.11¼ .11½
64-66 450 end point	.10 .10¼	.10½ .10½	.11¼ .11½
68-70 437 end point	.10¼ .10½	.10½ .10¾	.11½ .11¾

*As Sistersville, W. Va.

BURNING OIL

	Mar. 24		Mar. 17		Mar. 10	
KANSAS—						
41-43 water white Kerosene	.04¾	.05	.05		.05¼	.05½
NORTH LOUISIANA—						
41-43 prime white Kerosene	.05	.05¼	.05	.05¼	.05½	.05¾
42-44 water white Kerosene	.05¼	.05½	.05¼	.05½	.05¾	.06
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	**.04¼**	**.04⅝**	**.04½**	**.04⅝**	**.04⅝**	**.04⅞**
42-44 water white Kerosene	.04½	.04⅝	.04¾	.04⅞	.05	.05¼
40-41 prime white Kerosene	.04		.04¼		.04½	.04⅝
ROCKY MOUNTAIN STATES—						
*40-42 water white Kerosene	.07¼	.07½	.07¾	.08	.07⅝	.08
NORTH TEXAS—						
41-43 water white Kerosene	.04¼	.04½	.04½	.04⅝	.04⅝	.04⅞
40-42 prime white Kerosene	.04	.04¼	.04¼	.04½	.04½	.04⅝
41-43 prime white Kerosene	.04½	.04¼	.04¼	.04½	.04½	.04⅝
42-44 water white Kerosene	.04½	.04⅝	.04¾	.04⅞	.05	.05⅛
ARKANSAS—						
41-43 water white Kerosene	.04¾	.05	.05	.05¼	.05½	.05⅝
42-44 water white Kerosene	.05	.05¼	.05¼	.05½	.05⅝	.06
PENNSYLVANIA—						
43 Kerosene prime white	.07		.07⅛		.07¼	
45 Kerosene water white	.07⅛		.07⅜		.07½	
46 Kerosene water white	.08		.08		.08	
47 Kerosene water white	.08¼		.08½		.08¼	
34 Neutral	.08¾		.08¾		.08¾	
34 Sundebloomed Neutral	.10		.10		.10	
36 Miners' Neutral	.08		.08		.08	
300 Mineral Seal	.07¾		.08		.08¼	
CALIFORNIA—						
40-42 water white (high burning test)	.07½	.08	.07½	.08	.07½	.08
Engine distillate, 43-45 445 end point	.08	.08½	.08½	.09	.08½	.09
Engine distillate, 42-44 480 end point	.07	.07¾	.07¾	.08	.07⅝	.08
CHICAGO DIST. (Based on Group 3)—						
41-43 water white Kerosene	.04¾	.04½	.04½	.04⅝	.04⅝	.04⅞
42-44 water white Kerosene	.04⅝	.04¾	.04¾	.04⅞	.04¾	.04⅞

*Colorado points.

FUEL OILS

	Mar. 24		Mar. 17		Mar. 10	
KANSAS—						
24-26 Fuel Oil	1.25	1.30	1.30	1.35	1.40	1.45
32-36 Gas Oil	.03½	.03⅝	.03⅝	.03¾	.03¾	.03⅞
38-40 Distillate	.03⅝	.03¾	.03¾	.03⅞	.03⅞	.04
OKLAHOMA (Group 3)—						
22-26 Fuel Oil (sellers' cars)	1.07½	1.12½	1.12½	1.15	1.17½	1.22½
24-26 Fuel Oil (buyers' cars)	1.07½	1.12½	1.12½	1.15	1.20	
24-26 Fuel Oil (sellers' cars)	1.10	1.12½	1.15		1.20	1.25
28-30 Fuel Oil (sellers' cars)	1.15	1.20	1.20	1.25	1.30	
32-36 Gas Oil	.03¼	.03⅜	.03⅜	.03½	.03½	.03⅝
36-38 Distillate	.03½		.03⅝		.03⅝	
38-40 Straw distillate	.03½	.03⅝	.03⅝	.03¾	.03¾	.03⅞
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	1.15	1.20	1.25	1.30	1.35	
26-30 Fuel Oil	1.25		1.35		1.40	1.45
32-36 Gas Oil	.03¼	.03⅜	.03½	.03⅝	.03⅝	.03⅞
36-38 Distillate	.03⅜	.03½	.03⅝	.03¾	.03¾	.03⅞
38-40 Straw distillate	.03¾	.03⅞	.03¾	.04	.03⅞	.04
NORTH LOUISIANA—						
18-20 Fuel Oil	1.20	1.25	1.20	1.25	1.25	1.30
32-36 Gas Oil	.03½	.03¼	.03½	.03¾	.03¾	.04
ARKANSAS—						
38-40 Distillate	.03⅞	.04	.04	.04¼	.04	.04¼
32-36 Gas Oil	.03½	.03⅝	.03¾	.03⅞	.04	
22-26 Refinery Fuel Oil	1.10	1.15	1.15	1.20	1.25	1.30
GULF COAST (South Texas)—						
Gas Oil	.04¾	.05½	.04¾	.05½	.05	.05½
Fuel Oil	1.65	1.70	1.65	1.70	1.70	1.80
PENNSYLVANIA—						
30-34 Fuel Oil	.05¾		.05⅞		.05⅞	
36-40 Fuel Oil	.06		.06½		.06½	
CALIFORNIA—						
33-36 Distillate	.04¾	.05	.04¾	.05	.04¾	.05
27-33 Distillate	.04	.04½	.04	.04½	.04½	.04¾
15-20 Fuel Oil (at tide water)	1.60	1.65	1.60	1.65	1.60	1.65
CHICAGO DIST. (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars, Group 3)	1.10	1.15	1.20	1.25	1.20	1.25
22-24 (El Dorado)	1.10	1.15	1.25		1.25	
18-20 (Smackover)	1.15	1.20	1.20	1.25	1.20	1.25
32-36 Gas Oil	.03¾	.03½	.03⅝	.03¾	.03⅝	.03⅞
36-38 Distillate	.03⅝		.03⅝		.03⅝	
38-40 Straw distillate	.03¾		.03¾		.03¾	

LUBRICATING OILS AND WAX

	Mar. 24		Mar. 17		Mar. 10	
OKLAHOMA (Group 3)—						
Neutrals:						
70-80 vis., 2½ color, 20-25 cold test	.07	.07½	.07	.07½	.07	.07½
100 vis., 2 color, 20-25 cold test	.08½	.09	.08½	.09	.08½	.09
100 vis., 3 color, 20-25 cold test	.08	.08½	.08	.08½	.08	.08½
150 vis., 3 color, 20-25 cold test	.10½	.11	.10½	.11	.10½	.11
150 vis., 4 color, 20-25 cold test	.10¼	.10½	.10¼	.10¾	.10¼	.10⅝
180 vis., 4 color, 23-28 cold test	.10¾	.11¼	.10¾	.11¼	.10¾	.11⅛
180 vis., 3 color, 23-28 cold test	.11	.11½	.11	.11½	.11	.11⅝
200 vis., 3 color, 23-28 cold test	.12	.12½	.12	.12½	.12	.12⅝
200 vis., 4 color, 23-28 cold test	.11¾	.12¼	.11¾	.12¼	.11¾	.12⅛
220 vis., 3 color, 25-30 cold test	.12	.12½	.12	.12½	.12	.12⅝
220 vis., 4 color, 25-30 cold test	.13½	.14	.13½	.14	.13½	.14
240 vis., 3 color, 25-30 cold test	.16	.16½	.16	.16½	.16	.16½
240 vis., 4 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
280 vis., 3 color, 25-30 cold test	.17½	.18	.17½	.18	.17½	.18
280 vis., 4 color, 25-30 cold test	.16½	.17	.16½	.17	.16½	.17
Red Neutrals:						
180 vis., 5 color, 23-28 cold test	.10½	.11	.10½	.11	.10½	.11
180 vis., 6 color, 23-28 cold test	.14½	.15	.14½	.15	.14½	.15
200 vis., 5 color, 23-28 cold test	.11½	.12	.11½	.12	.11½	.12
200 vis., 6 color, 23-28 cold test	.15½	.16	.15½	.16	.15½	.16
220 vis., 5 color, 25-30 cold test	.13½	.14	.13½	.14	.13½	.14
220 vis., 6 color, 25-30 cold test	.17¼	.17¾	.17¼	.17¾	.17¼	.17¾
240 vis., 5 color, 25-30 cold test	.15	.15½	.15	.15½	.15	.15½
240 vis., 6 color, 25-30 cold test	.18¼	.18¾	.18¼	.18¾	.18¼	.18¾
280 vis., 5 color, 25-30 cold test	.15½	.16	.15½	.16	.15½	.16
Cylinder Stocks—						
180-200 vis., S. R. green, 40-45 cold test	.10	.10½	.10½	.11	.10½	

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

180-200 vis., S. R. green, 40-45 cold test	.09½	.10	.10	.10½	.10	
170-190 dark green, 40-45 cold test	.07½		.08		.08	
600, E filtered	.21¾		.21¾		.21¾	
190-200 vis. @ 210 "D" Bright Stock	.36		.36		.36	
200-210 vis. @ 210 "E" Bright Stock	.31		.31		.31	
150 vis. @ 210 "D" Bright Stock	.32		.32		.32	
150 vis. @ 210 "E" Bright Stock	.38		.38		.38	
Waxes:						
124-126 White Crude Scale Wax	.05	.05¼	.05	.05¼	.05	.05¼
PENNSYLVANIA—						
150, 3 color	.21¼		.21¼		.21½	
180, 3 color	.23½		.23½		.23¾	
200, 3 color	.25½		.25½		.25¾	
220, 3 color	.28¼		.28½		.28½	
600, steam refined	.20½		.22¼		.22½	
635, steam refined	.25		.26½		.28	
650, steam refined	.27		.28½		.29½	
600, Pennsylvania flash	.34		.39½		.39½	
630, Pennsylvania flash	.40		.40		.40	
*550, E filtered	.23½		.24		.24	
*600, E filtered	.26½		.26½		.27½	
600, E filtered	.25½		.25½		.26	
600, D filtered	.32		.32½		.32½	
550, E filtered	.23		.23		.23	
550, D filtered	.26		.27		.27	
Pennsylvania Bright Stock	.39		.39		.40½	
122-124 White Crude Scale Wax	.05½		.05½		.05½	
†124-126 White Crude Scale Wax	.05⅝		.05⅝		.05⅝	

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.07	.08	.07	.08	.07	.08
No. 2 color, 100 vis., pale oil	.10½	.11½	.10½	.11½	.10½	.11½
No. 2 color, 150 vis., pale oil	.12	.13	.12	.13	.12	.13
No. 3 color, 200 vis., pale oil	.15	.16	.15	.16	.15	.16
No. 3 color, 300 vis., pale oil	.17	.18	.17	.18	.17	.18
No. 3½ color, 500 vis., pale oil	.19	.20	.19	.20	.19	.20
No. 3½ color, 750 vis., pale oil	.24½	.25½	.24½	.25½	.24½	.25½
No. 4½ color, 1200 vis., pale oil	.27½	.28½	.27½	.28½	.27½	.28½
No. 4 color, 2000 vis., pale oil	.31	.32	.31	.32	.31	.32
No. 2 plus color, 150 vis., pale filtered	.23½		.23½		.23½	
No. 2 plus color, 200 vis., pale filtered	.25		.25		.25	
No. 2½ minus color, 300 vis., pale filtered	.28½		.28½		.28½	
No. 2½ color, 500 vis., pale filtered	.32½		.32½		.32½	
No. 2½ color, 800 vis., filtered	.42½		.42½		.42½	
No. 5 to 6 color, 200 vis., red oil	.13½	.14½	.13½	.14½	.13½	.14½
No. 5 to 6 color, 300 vis., red oil	.15½	.16½	.15½	.16½	.15½	.16½
No. 5 to 6 color, 500 vis., red oil	.17½	.18½	.17½	.18½	.17½	.18½
No. 5 to 6 color, 750 vis., red oil	.22½	.23½	.22½	.23½	.22½	.23½
CALIFORNIA—						
130 pale, 2½-3 color	.12	.12½	.12	.12½		
200 vis., 2½-3 color	.15½	.16	.15½	.16	.14½	.15½
300 vis., 3 -3½ color	.17	.17½	.17	.17½	.16	.17
350 vis., 3½-4 color	.18½	.19	.18½	.19	.17½	.18½
400 vis., 3½-4 color	.20	.20½	.20	.20½	.19	.20
Red Neutrals:						
200 vis., 4½-5 color	.14	.14½	.14	.14½	.13	.14
300 vis., 5 -6 color	.15	.15½	.15	.15½	.14	.15
400 vis., 5 -6 color	.17	.17½	.17	.17½	.16	.17
500 vis., 4½-5 color	.20	.21	.20	.21		
500 vis., 6 -6½ color	.18	.19	.18	.19	.17	.18
6 vis., 6½ plus color	.19	.19½	.19	.19½	.18	.19

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK DOMESTIC MARKET

Bayonne Refinery Prices:	Mar. 24	Mar. 17	Mar. 10
U. S. Motor Gasoline, 58-60 437	.17	.18	.18
*Bunker Oil, 14-16 Be.	1.80	1.80	1.80
*Diesel Oil, 28-30 Be.	2.70	2.70	2.70
Furnace Oil, New York City	.10	.10	.10
Gas Oil, 32-36 Be.	.06¾	.06¾	.06¾
41-43 Kerosene prime white	.06¾	.06¾	.06¾

*Lighterage, 6.5c a barrel extra.

NEW YORK EXPORT PRICES

Motor Gasoline:	Mar. 24	Mar. 17	Mar. 10
58-60 Be. gravity, in cases	.29.15	.30.15	.30.15
U. S. Navy, in bulk	.15	.16	.16
Naphtha:			
60° F., 59-61 Be. gravity, in bulk	.18¾	.18¾	.18¾
60° F., 63-66 Be. gravity, in bulk	.20	.20	.20
60° F., 66-68 Be., gravity, in bulk	.21½	.21½	.21½
Kerosene:			
Standard white, 40-42 Be. grav., in bulk	.06½	.06½	.06½
Standard white, 40-42 Be. grav., in barrels	.13½	.13½	.13½
Standard white, 40-42 Be. grav., in cases	.16.9	.16.9	.16.9
Water white, 42-44 Be. grav., in bulk	.07½	.07½	.07½
Water white, 42-44 Be. grav., in barrels	.14½	.14½	.14½
Water white, 42-44 Be. grav., in cases	.17.9	.17.9	.17.9
†Lubricating Oils:			
Cylinder Stock, extra filtered, 600, barrels	.46	.46½	.46½
Cylinder Stock, light filtered, 600, barrels	.41	.40½	.40½
No. 1 white neutral, .878 spec. grav.	.44	.43	.43
No. 1 Summer Black, .895 spec. grav.	.20	.19	.19
No. 5 Bright Stock, .897 spec. grav.	.49	.50½	.50½
Special "A" red oil, .897 spec. grav., 170 vis.	.21	.21	.21
No. 2 red oil, .903 spec. grav., 212 vis.	.22	.22	.22
No. 1 red oil, .905 spec. grav., 265 vis.	.22	.23	.23
Polar red oil, .906 spec. grav., 295 vis.	.24	.25	.25
Pale oil, "25", .899 spec. grav.	.21½	.20½	.20½
Pale oil, "28", .892 spec. grav.	.17	.16	.16
Paraffin Wax:			
120-122 a.m.p., per lb.	.06¼	.06¼	.06¼
125-127 a.m.p., per lb.	.06⅜	.06¾	.06¾
130-132 a.m.p., per lb	.06¾	.06⅝	.06⅝
135-137 a.m.p., per lb.	.07½	.07½	.07½

†All lube prices in barrels.

LOS ANGELES EXPORT PRICES

	Mar. 24		Mar. 17		Mar. 10	
Kerosene water white	.05½	.06	.05½	.06	.05	.05½
U. S. Motor gasoline, 54-56, 437 end point	.10	.10½	.10½	.11	.10½	.11

CRUDE OIL PRICES

CRUDE PRICE CHANGES

March 21.—Standard Oil Co. of Louisiana reduced the price of Cotton Valley

(Continued on Page 170)

Arkansas and North Louisiana

Caddo, 38° and above	$2.05
35° to 37.9°	1.95
32° to 34.9°	1.85
Below 32°	1.70
Homer, 35° and above	1.80
32° to 34.9°	1.70
31° to 32.9°	1.60
Below 31°	1.45
Haynesville, 33° and above	1.70
Below 33°	1.60
El Dorado, 33° and above	1.70
Below 33°	1.60
Bull Bayou, 38° and above	1.85
35° to 37.9°	1.70
32° to 34.9°	1.55
Cotton Valley	1.10
De Soto	1.90
Crichton	1.70
Bellevue	2.00
*Stephens, Ark.:	
Below 26°	1.40
26° and above	1.60
Smackover†:	
Below 25°	1.00
25° to 25.9°	1.10
26° to 26.9°	1.20
27° to 27.9°	1.25
28° and above	1.30

*Posted by Atlantic Oil Producing Co.

Wyoming and Montana

Rock Creek (Wyo.)	2.00
Salt Creek	1.60
Big Muddy	2.00
Mule Creek	1.50
Grass Creek (light)	2.15
Elk Basin	2.15
Lance Creek	2.15
Osage	2.15
Cat Creek (Mont.)	2.15
Sunburst (Mont.)	1.40
Lost Soldier	1.28
Greybull and Torchlight	2.00
Hamilton Dome	1.60
Hogback, N. Mex.	2.20

Lost Soldier and Lander based on contracts.

Oklahoma, Kansas, North and Central Texas

Prairie Oil & Gas Co. and other major purchasing companies, except as noted:

Below 30°	1.35
30° to 32.9°	1.55
33° to 35.9°	1.80
36° to 38.9°	2.00
39° to 41.9°	2.25
42° and above	2.35
Sinclair Crude Oil Purchasing Co.—	
39° to 41.5°	2.25
41.6° and above	2.35
Magnolia Petroleum Co.:	
Below 28°	1.00
28° to 30.9°	1.35
31° to 32.9°	1.55
Corsicana light	.200
Corsicana heavy	1.00
Mexia and Wortham	2.00
Humble Oil & Refining Co.	
Powell, Currie, Richland	2.00
Mexia and Wortham	2.00
Moran crude:	
Below 30° gravity	1.35
30° to 32.9°	1.55
33° to 35.9°	1.80
36° and above	2.00

Ranger and North Texas, same as Prairie.

Gulf Coast

Grade A	2.00
Grade B	1.75
Luling (based on contracts) 90c and	1.15
Laredo (Magnolia Petroleum Co.)	.85
Rockdale-Minerva (Milam County)	1.25
Calliham (Live Oak-McMullen)	1.15
Webb, Jim Hogg, Zapata	1.00
*High Island	1.20

*Posted by Sun Oil Co.

***Somerset**

Below 30°	1.25
30° to 32.9°	1.35
33° to 35.9°	1.80
36° to 38.9°	1.95
39 to 41.9°	2.10
42° and above	2.35

*Posted by Grayburg Oil Co.

California

14° to 19.9°	1.25
20° to 20.9°	1.27
21° to 21.9°	1.30
22° to 22.9°	1.33
23° to 23.9°	1.36
24° to 24.9°	1.40
25° to 25.9°	1.44
26° to 26.9°	1.48
27° to 27.9°	1.52
28° to 28.9°	1.56
29° to 29.9°	1.60
30° to 30.9°	1.64
31° to 31.9°	1.68
32° to 32.9°	1.72
33° to 33.9°	1.76
34° to 34.9°	1.80
35° and above	1.85
Rosecrans-Athens Field, only:	
Below 35.9° gravity, same as other fields.	
36° to 36.9°	1.92
37° to 37.9°	2.00
38° to 38.9°	2.08
39° to 39.9°	2.16
40° to 40.9°	2.24
41° to 41.9°	2.32
42° and above	2.40

Eastern States

Penna Grade Oil in New York Transit Lines	3.65
Bradford District Oil in National Transit Lines	3.65
Penna Grade Oil in National Transit Lines	3.55
Penna Grade Oil in Southwest Pa. Pipe Lines	3.55
Penna Grade Oil in Eureka Pipe Line Lines	3.50
Penna Grade Oil in Buckeye Pipe Lines	3.40
Cabell Grade Oil in Eureka Pipe Line Lines	2.30
Corning Grade Oil in Buckeye Pipe Line Lines	2.25
Somerset Medium Oil in Cumberland Pipe Line Lines	2.30
Somerset Light Oil in Cumberland Pipe Line Lines	2.45
Ragland Grade Oil in Cumberland Pipe Line Lines	1.20
Lima	2.33
Wooster	2.25
Illinois	2.02
Indiana	2.03
Princeton	2.02
Plymouth	1.55
Waterloo	1.10
†Oil Springs, Canada	2.80
†Petrolia, Canada	2.73
*Western Kentucky, 36° and above	2.05
*Western Kentucky, 33° to 35.9°	1.95
*Western Kentucky, 32.9 and below	1.85
Cumberland, Barren and Monroe Counties (Kentucky), (Paragon Development Co.)	2.43

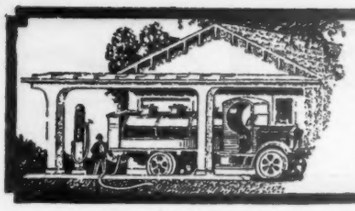
†Plus Government bounty of 26½c.

*Prices for Warren, Allen, Hancock, Simpson and Ohio Counties by Indian Refining Co.

Mexican Crude

*Tuxpam (f.o.b. Mexican ports)	1.35
†Panuco (f.o.b. Mexican ports)	1.25
Tuxpam (New York)	1.99
Panuco (New York)	1.78

*Plus 33.00c tax. †20.00c tax.



TANK WAGON MARKETS

Tank wagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, March 24

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)

Main Service Station Price

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Chicago Dist.—				
†100 gals. or more	18.0	21.0	...	12.0

Tank wagon prices on April 19, 1922; g. up 1¼c; May 8, g. up 1c; June 27, both up 1c; July 19, g. down 2c, k. down 1c; Oct. 10, g. down 2c; Oct. 21, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 30, g. up 1c; Aug. 14, g. down 6.6c; Oct. 4, k. down 1½c; Nov. 10, g. down 1.4c; Dec. 29, g. up 2c; Jan. 12, 1924, g. up 2c, k. up 1c; Feb. 5, g. up 2c, k. 1c; July 18, g. down 1c; July 30, g. and k. down 1c; Sept. 12, g. down 2c; Jan. 23, 1925, g. up 1c; Jan. 26, g. up 1c; Jan. 31, g. up 1c; Jan. 26, g. up 1c; Jan. 31, g. up 1c; Feb. 12, g. up 2c, k. up 1c.

Decatur, Ill.	18.2	20.2	...	12.5
East St. Louis	17.1	19.35	...	11.6
Joliet	18 4	20.4	...	12.7
Peoria	18.2	20.2	...	12.5
Quincy	18.2	20.2	...	12.3
Davenport, Ia.	18.5	20.5	...	12.9
Des Moines	18.5	20.5	...	12.9
Keokuk	18.5	20.5	...	12.9
Sioux City	18.0	20.0	...	12.5
Duluth, Minn.	19.5	21.5	...	13.6
Minneapolis	19.3	21.2	...	13.6
La Crosse, Wis.	19.2	21.2	...	13.4
Milwaukee	18.1	20.1	...	12.3
Madison	18.3	20.3	...	12.5
Detroit, Mich.	20.8	22.8	2.0	13.2
Grand Rapids	20.7	22.7	2.0	13.1
Saginaw	20.9	22.9	2.0	13.3
Evansville, Ind.	20.0	22.0	2.0	12.5
Fort Wayne	20.4	22.4	2.0	12.9
Indianapolis	20.2	22.2	2.0	12.7
South Bend	20.4	22.4	2.0	12.9
Fargo, N. D.	20.9	22.9	1.0	15.6
Huron, S. D.	23.0	25.0	3.0	14.1
Sioux Falls	22.5	24.5	3.0	13.6
*Kansas City, Mo.	20.9	22.9	3.0	11.3
*Springfield	20.8	22.8	3.0	12.2
*St. Louis	19.6	21.9	2.5	12.0
*St. Joseph	20.0	22.0	2.5	11.9
Wichita, Kans.	17.8	19.8	...	10.8
Bartlesville, Okla.	19.4	21.4	...	10.9

*State tax is 2c. Remainder is city tax.

†Tank wagon price on less than 100 gallons, 19.0.

ATLANTIC COAST DISTRICT

Standard Oil Co. (New Jersey)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Newark, N. J.	18.0	20.0	...	13.0
Atlantic City	18.0	....	...	13.0
Annapolis, Md.	21.0	23.0	2.0	13.0
Baltimore	20.0	22.0	2.0	11.0
Cumberland	21.0	23.0	2.0	12.5
Washington, D. C.	20.0	22.0	2.0	12.5
Norfolk, Va.	22.0	24.0	3.0	13.5
Petersburg	22.0	....	3.0	13.5
Danville	22.0	....	3.0	13.0
Richmond	21.0	23.0	3.0	13.5
Roanoke	22.0	24.0	3.0	13.5
Keyser, W. Va.	20.0	....	2.0	13.5
Charleston	19.0	21.0	2.0	13.5
Parkersburg	19.0	21.0	2.0	13.5
Wheeling	19.0	21.0	2.0	13.5
Charlotte, N. C.	22.0	24.0	3.0	14.5
Hickory	22.0	....	3.0	14.5
Mt. Airy	22.8	....	3.0	14.5
Salisbury	22.0	....	3.0	14.5
Charleston, S. C.	22.0	24.0	3.0	15.0
Columbia	22.0	24.0	3.0	.15.0

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND

Atlantic Refining Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
*Pittsburgh, Pa.	19.0	24.0	...	14.0
*Philadelphia	19.0	24.0	...	14.0
*Scranton	19.0	24.0	...	14.0
**Allentown	19.0	24.0	...	14.0
*Altoona	19.0	24.0	...	14.0
*Erie	19.0	24.0	...	14.0
Dover, Del.	21.0	24.0	2.0	14.0
Wilmington	21.0	24.0	2.0	14.0
Springfld, Mass.	20.0	24.0	...	13.0
Worcester, Mass.	20.0	24.0	...	13.0
Boston	20.0	24.0	...	11.0
Providence, R. I.	20.0	24.0	...	13.0
Hartford, Conn.	21.0	25.0	1.0	12.0
New Haven Conn.	21.0	25.0	1.0	13.0

*Pennsylvania tax of 2 cents is collected by the dealer and paid by him direct to the State.

CENTRAL SOUTH DISTRICT

Standard Oil Co. (Louisiana)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
New Orleans	19.5	21.5	2.0	11.0
Alexandria	19.5	21.5	2.0	13.0
Baton Rouge	18.0	20.0	2.0	11.5
Lake Charles	19.5	21.5	2.0	13.0
Shreveport	19.5	21.5	2.0	13.0
Memphis, Tenn.	20.0	22.0	3.0	14.0
Chattanooga	21.5	23.5	3.0	14.5
Knoxville	22.5	24.5	3.0	15.0
Nashville	21.5	23.5	3.0	13.5
Bristol	22.0	24.0	3.0	13.5
Little Rock, Ark	22.0	24.0	4.0	11.0

SOUTHERN DISTRICT

Standard Oil Co. (Kentucky)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Atlanta, Ga.	24.0	27.0	3.0	13.0
Augusta	24.0	27.0	3.0	15.0
Macon	24.0	27.0	3.0	14.5
Savannah	22.0	25.0	3.0	13.0
Birmingham, Ala.	22.0	25.0	2.0	14.5
Mobile	21.0	24.0	2.0	12.5
*Montgomery	23.0	26.0	3.0	15.5
Clarksdale, Miss.	22.0	25.0	3.0	12.0
Jackson	22.0	25.0	3.0	10.0
Natchez	21.5	24.5	3.0	11.5
Vicksburg	21.5	24.5	3.0	11.5
Jacksonville, Fla.	22.0	25.0	3.0	13.0
Miami	24.0	27.0	3.0	14.5
Pensacola	22.0	25.0	3.0	13.5
Tampa	22.0	25.0	3.0	13.0
Lexington, Ky.	22.0	25.0	3.0	14.0
Covington	20.0	23.0	3.0	14.0
Louisville	22.0	24.0	3.0	12.0

*In addition to the State tax of 2 cents on gasoline. Montgomery has city tax of 1 cent on gasoline and ⅛ cent on kerosene.

SOUTHWESTERN DISTRICT

Magnolia Petroleum Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Dallas, Texas	17.0	21.0	1.0	12.0
Fort Worth	17.0	21.0	1.0	12.0
Houston	17.0	21.0	1.0	12.0
San Antonio	17.0	20.0	1.0	12.0
El Paso	19.0	22.0	1.0	13.0
Muskogee, Okla.	19.0	22.0	2.5	12.0
Oklahoma City	19.0	22.0	2.5	12.0
Tulsa	19.0	22.0	2.5	11.0
Ft. Smith, Ark.	21.5	24.5	4.0	12.0
Little Rock	22.0	24.0	4.0	11.0
Texarkana	19.0	22.0	1.0	12.0

ROCKY MOUNTAIN DISTRICT

Continental Oil Co.

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Casper, Wyo.	20.0	22.0	1.0	13.0
Cheyenne	21.5	23.5	1.0	14.5
Albuquerque, N. M.	24.5	27.5	1.0	16.5
Salt Lake, Utah	23.0	25.0	2.5	18.0
Denver, Colo.	21.0	23.0	2.0	14.5
Pueblo	21.0	23.0	2.0	14.5
Butte, Mont.	23.0	23.0	2.0	16.0
Helena	25.0	27.0	3.0	17.0
Boise, Idaho	24.5	26.5	3.0	20.0

NEW YORK AND PART OF NEW ENGLAND DISTRICT

Standard Oil Co. (New York)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Albany, N. Y.	20.0	....	...	13.0
*New York	20.0	....	...	13.0
Buffalo	20.0	....	...	12.0
Rochester	20.0	....	...	13.0
Syracuse	20.0	....	...	12.0
Boston, Mass.	20.0	....	...	13.0
Providence, R. I.	20.0	....	...	13.0
Augusta, Me.	21.0	....	1.0	13.0
Manchester, N. H.	22.0	....	2.0	13.0
Burlington, Vt.	21.0	....	1.0	13.0

*Price in steel barrels.

Note: Standard Oil Co. of New York does not generally quote service station price in its territory. In most cases the service station price is 2 or 3 cents higher than tank wagon price.

PACIFIC COAST DISTRICT

Standard Oil Co. of California

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
San Francisco	17.0	20.0	2.0	15.5
Los Angeles	15.5	18.5	2.0	15.5
Fresno	17.5	20.5	2.0	19.5
Reno, Nev.	20.5	23.5	2.0	19.0
Portland, Ore.	18.0	21.0	3.0	16.5
Seattle, Wash.	17.0	20.0	2.0	16.5
Tacoma	17.0	20.0	2.0	16.5
Spokane	21.0	24.0	2.0	20.5
Phoenix, Ariz.	23.0	26.0	3.0	21.5

OHIO

Standard Oil Co. (Ohio)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
All Ohio points.	18.5	20.5	...	15.0

NEBRASKA

Standard Oil Co. (Nebraska)

	Gasoline			Kero.
	Tank wagon	Service station	Incldg tax of	Tank wagon
Omaha	16.0	18.0	...	12.5
Crawford	19.0	....	...	13.25
McCook	19.75	21.75	...	14.0
Norfolk	18.75	20.75	....	13.0
North Platte	19.75	21.75	...	13.75
Scotts Bluff	19.25	21.25	...	13.25

TANK WAGON PRICE CHANGES

March 19.—Standard Oil Co. of New Jersey reduced the tank wagon price of gasoline 1 cent a gallon in its territory, including New Jersey, Maryland, Virginia, North Carolina, South Carolina, and the District of Columbia. Standard Oil Co. of Louisiana reduced the tank wagon and service station price of gasoline in Louisiana, Arkansas and Tennessee 1 cent.

March 19.—Magnolia Petroleum Co. reduced the tank wagon price of gasoline at Little Rock, Ark., 1 cent a gallon.

March 20.—Standard Oil Co. of New York reduced the tank wagon price of motor gasoline in New York and New England States 1 cent a gallon.

March 20.—Magnolia Petroleum Co. reduced the tank wagon price of gasoline at Oklahoma City and Tulsa, Okla., 1 cent a gallon.

March 21.—Magnolia Petroleum Co. reduced the tank wagon price of gasoline at Muskogee, Okla., 1 cent a gallon.

March 10.—Standard Oil Co. of Indiana raised the tank wagon price of gasoline 1 cent a gallon at Sioux Falls, S. D., to absorb the increase in the State tax from 2 to 3 cents a gallon.

March 11.—Standard Oil Co. of Indiana raised the tank wagon price of gasoline 1 cent a gallon at Huron, S. D., to absorb the increase in the State tax from 2 to 3 cents a gallon.

CRUDE PRICES CHANGES

(Continued from Page 169)

and all grades of Smackover crude 15 cents a barrel.

March 23.—Joseph Seep Purchasing Agency reduced Pennsylvania oil in New York Transit Lines, Bradford district oil in National Transit Lines, Pennsylvania grade oil is Southwest Pennsylvania pipe lines and Pennsylvania oil in National Transit Lines 20 cents a barrel; Pennsylvania grade oil in Eureka Pipe Lines reduced 25 cents a barrel, and Pennsylvania grade oil in Buckeye Pipe Lines reduced 35 cents a barrel.

March 24.—Ohio Oil Co. reduced the price of Lima, Indiana, Illinois, Princeton, Plymouth and Waterloo crude 10 cents a barrel.

STANDARD PURCHASE AIDS GASOLINES

(Continued from Page 20)

ception of one company which may at any time get into the market for more crude."

This official also says the danger lies in the continued dumping of gasoline by independent refiners. If this action is not discontinued he says the large refiners to which his company sells will seek lower posted crude prices so they can more effectively compete with the smaller concerns.

The foregoing opinion is representative of that expressed by other large buyers. The two largest buyers of crude in Kansas and Oklahoma, the Prairie Oil & Gas Co. and the Sinclair Crude Oil Purchasing Co. have been drawing on storage for some time.

Gasolines and Naphtha

Previous to the Standard of Indiana buying the 58-60 U. S. Motor was being offered in substantial quantities as low as 10 cents. With the rumor of the Standard's proposed purchases general, this 10-cent material largely disappeared on Saturday. Resale agents who had short sales to cover before the end of the month were anxious to buy at 10 cents but was forced to raise its price to 10¼ cents. Sales due to this situation have been heavy during the past few days.

Some U. S. Motor business has been placed for April delivery. One refiner, previous to the Indiana purchase last week, is reported to have sold at 10 cents for delivery through April. Other sales at 10¼ cents were made. Since the first of the week refiners have been slow in offering gasoline for April delivery hoping that purchases between now and the first of April will result in a higher market. One buyer said on Monday refiners were asking as high as 11½ cents for April delivery.

The higher gravity gasolines were inactive and slumped as rapidly as the U. S. Motor grades. Export buyers are still out of the market except for small purchases occasionally made to relieve the refiners of gasoline for which they have no storage facilities. The 60-62, 400 grade was moving to the trade at 12¼ cents with resale material available as low as 11¾ cents. The 64-66, 375 was offered to export buyers as low as 13 cents. A few cars of the domestic grade sold under this price. The 50-52, 450 naphtha sold on Monday and Tuesday at 10 cents. Sales of lower gravities were made as low as 9½ cents.

Natural Gasolines and Blends

There is no indication of improvement in the demand for natural gasolines. For a day or two last week an attempt was made to establish a price range of 10, 9 and 8 cents for the A, B and C grades. All these prices were being shaded at least ¼-cent on Monday and Tuesday. Oklahoma manufacturers were forced to meet low prices coming from the Breckenridge area of North Texas. This applied especially to the absorption grades.

Blenders are daily lowering their prices in line with the refinery gasoline market. Important sales have been lost in Pennsylvania and other Eastern States due to the low prices prevailing for straight run gasoline. Jobbers prefer to buy the refinery gasoline when prices are low.

Kerosenes and Distillates

The 41-43 water white kerosene sold to the trade and for resale at 4¼ cents. Distillates are sluggish, the straw grades being offered at 3½ cents in any quantity. Practically all the business in both products during the week was routine. There were few inquiries from marketers who state that refiners are offering the material direct to the trade too low for them to handle sales at a profit. The prime white grades of kerosene sold as low as 4 cents.

Fuel and Gas Oils

Several large sellers of fuel oil reported substantial sales during the week. On Monday and Tuesday, several refiners said they would have nothing more to offer this month and little in April. A number of sales of the grades between 22 and 26 gravity were reported at $1.05 to $1.10 for April delivery. So far as known buyers who have been predicting $1 fuel for some time were unable to place any business at that price with Oklahoma refiners. Prices on the higher gravity grades ranged up to $1.20. Gas oil was offered freely at 3½ cents.

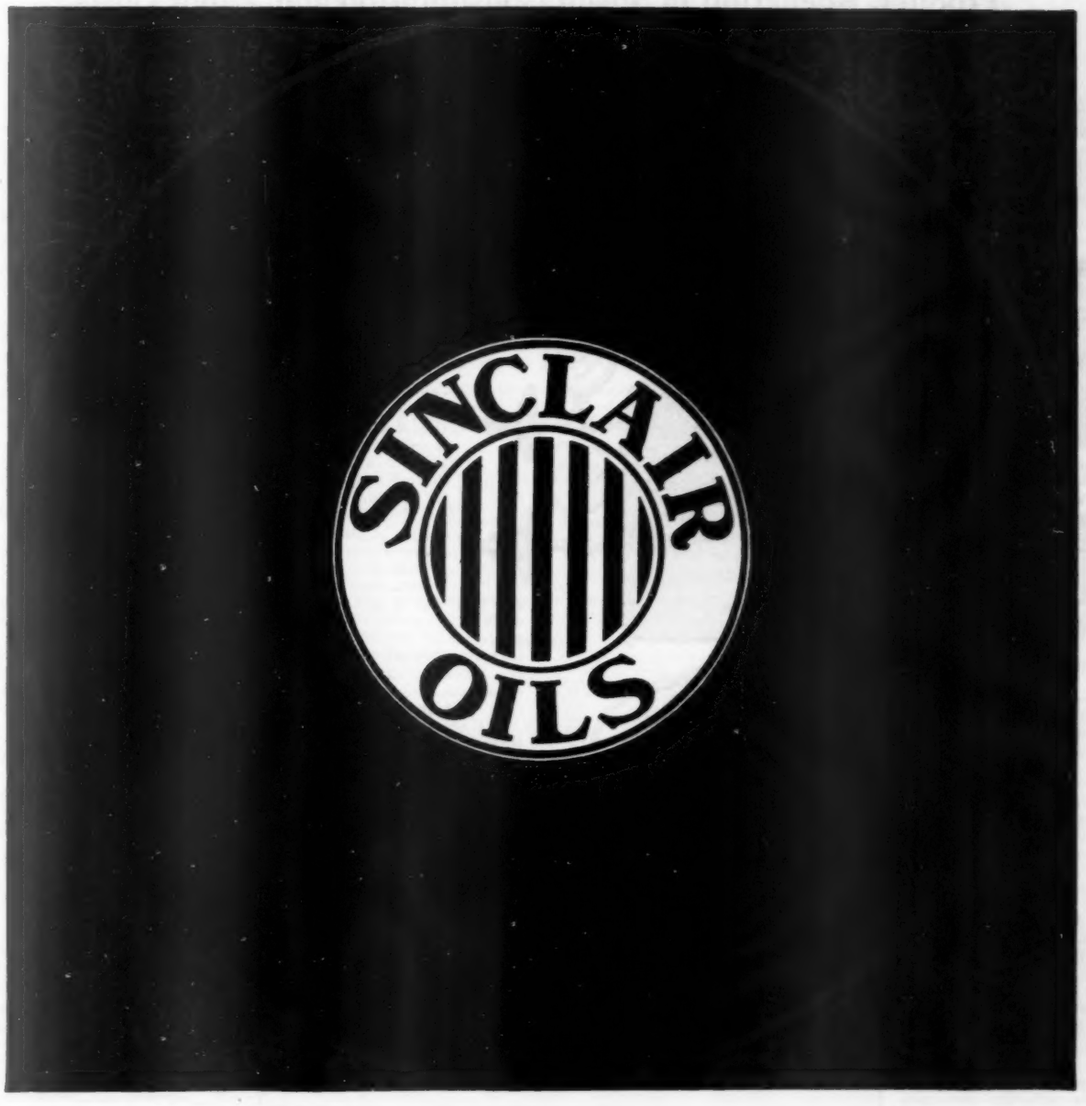
Lubricants and Wax

There was less activity in the wax market than any time in several months. The same situation exists in the East. New export inquiries are few and eastern buyers of the Oklahoma output are not anxious to buy. Due to the strong market of the past year, Oklahoma refiners do not have large wax storage and are attempting to force sales with price concessions. Some manufacturers of cylinder stocks have been forced to reduce their prices to meet domestic competition. A fair to strong movement of neutrals was reported by several manufacturers interviewed during the past week. Prices are unchanged.

SHARP MADE PRESIDENT

OKLAHOMA CITY, Okla., March 23. R. C. Sharp of Tulsa, vice president of the Oklahoma Natural Gas Co., was elected president of the Oklahoma Utilities Association at its seventh annual convention held here recently.

NEW YORK, N. Y., March 24.—The Standard Oil Co. of New Jersey today reduced all grades of export gasoline.



WHEN you select oils that carry the Sinclair trade-mark, you are assured of Sinclair quality — a quality that is unsurpassed, at prices that are fair always.

SINCLAIR REFINING COMPANY

New York: Sinclair Oil Bldg., 45 Nassau St. Chicago: 111 West Washington St.

Cable Address: "Lucent"

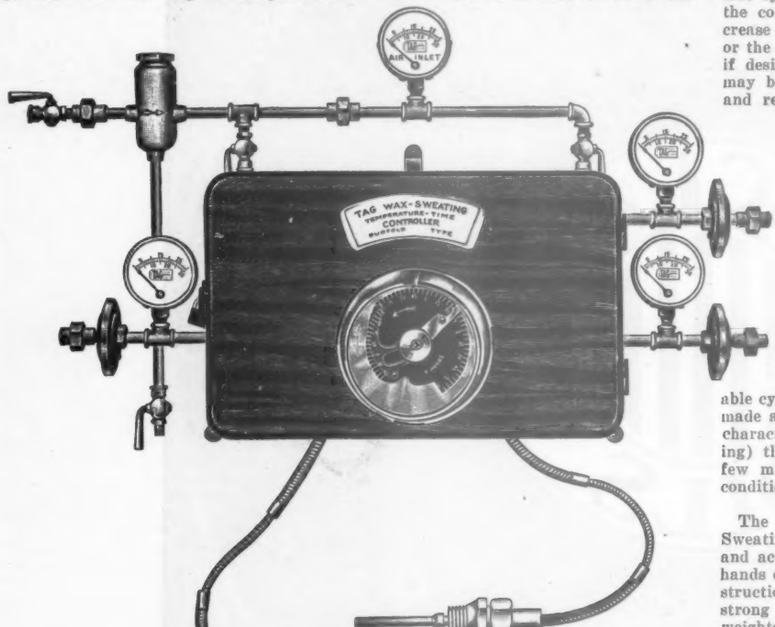
SINCLAIR OILS

Wax Sweating Temperature Contol

Automatic Equipment Increases Production and Quality of Product. Rdeuction in Steam Consumption and Labor Costs

By W. C. Begeebing
C. J. Tagliabue Mfg. Co.

In the sweating of wax trouble has always been experienced in producing the necessary gradual rise in temperature. Even after the development of efficient types of wax-sweating chambers and improvements in the design of the pans and of the heating and radiating surfaces, the problem of securing the right temperature was a vexatious one. Hand regulation of the temperature of the hot water circulated in the wax pans and of the heating coils in the room was extremely difficult because of the large volume of the room and the long duration of the process.



Automatic temperature control has proven particularly effective for this work, and by its use many savings and advantages have been attained. Most of these advantages lead to increased production, which is always desirable. Thus, the fact that accurate automatic temperature-time control materially reduces the time required for sweating, makes possible a larger output with attendant savings. Moreover, the accuracy of the control obtains a closer cut of the wax with the presence of less wax in the foot. This not only gives a bigger yield, but reduces sweating requirements. Another noteworthy advantage is the better control of the melting point assured by automatic regulation. And finally, the reduction in steam consumption and in labor costs, represents two very important economies, resulting from the employment of temperature-time control.

How Installation Is Made

Installation is usually made as shown in the accompanying diagram V-151, although slight modifications are sometimes necessary. The general practice is to establish by experiment or past experience, a temperature-time cycle, by which the best results are obtained. Two cams are then cut to automatically produce the cycle. These cams are mounted on a spindle rotated by clock-work in the controller case. One cam controls the admission of steam to the hot water heater and thereby controls the temperature of the hot water circulated through the wax in the pans. The other cam controls the admission of steam to the heating coils in the room. In most wax-sweating work it is desired to have the room temperature several degrees higher than the temperature of the water circulated through the wax. Both cams are cut so that the predetermined gradual increase in temperature is automatically produced. But by means of adjustment provided in the controller case, it is possible to increase or decrease the water temperature or the room temperature at any time. Or, if desired, the clock revolving the cams may be stopped for any length of time and restarted, thereby arresting the increase in temperature. Furthermore, the cams can be provided of the adjustable type.

On these adjustable type cams, the duration of the rise period can be adjusted by resetting a sliding member. Thus the same controller can b eused to produce a gradual rise to the desired temperature in 12 hours or 16 hours or 19 hours, or for any length of time, within the limits of the instruments, of course. As the temperature can be adjusted at any time, it will be seen that almost any conceivable cycle can be achieved by these easily-made adjustments. With changes in the character of the wax (or when resweating) the controller can be arranged in a few miutes to accommodate the altered conditions.

Adjustments Are Simple

The adjustments of the Tag Wax-Sweating Controller are quickly, easily and accurately accomplished, even in the hands of an unskilled operator. The construction is time-tried and is particularly strong and substantial. The use of weighted levers instead of the springs contributes to the uniform accuracy of the instrument. The controller case is also distinctive, involving the use of a caged ball. This design assures trouble-free, accurate and exceptionally quick-acting responsiveness of control.

In specifying wax-sweating control equipment, full information should be given. The following points should be covered:

(1) Dimensions of wax-sweating chamber and arrangement of plans. Submit blue print of room if possible.

(2) Length of the two connecting tubes.

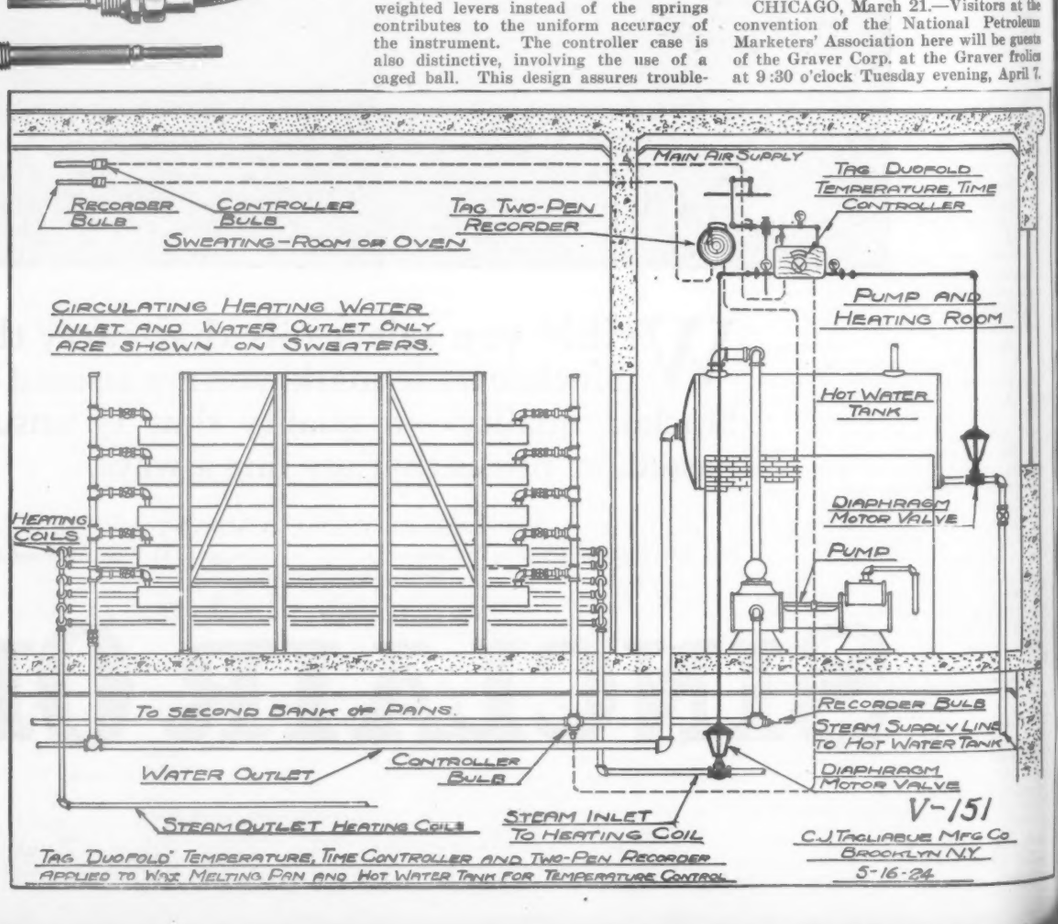
(3) Full details of temperature-time cycle of sweating and adjustments of temperature and of time which may be desired.

(4) Size of diaphragm-motor valve for heating coil in room and pressure of steam supplied to coil.

(5) Size of diaphragm-motor valve for steam line to hot water heater and pressure of steam supplied to heater.

(6) Whether a supply of clean, dry compressed air is available for operating the controller, and if so, what is its pressure?

A recording thermometer or recording thermometers should be installed to give the operator a graphic picture of his sweating process and provide a check on his methods and equipment. The permanent written record thus provided makes a basis for improvements in the cycle and the other factors which influence the yield such as the relation between coil temperature and oven temperature, local overheating, thickness of sweating cake, etc. A two pen recorder is shown installed in diagram V-151.


MAIN AIR SUPPLY
TAG DUOFOLD TEMPERATURE, TIME CONTROLLER
RECORDER BULB
CONTROLLER BULB
TAG TWO-PEN RECORDER
SWEATING-ROOM OR OVEN
CIRCULATING HEATING WATER INLET AND WATER OUTLET ONLY ARE SHOWN ON SWEATERS.
PUMP AND HEATING ROOM
HOT WATER TANK
HEATING COILS
DIAPHRAGM MOTOR VALVE
PUMP
TO SECOND BANK OF PANS.
RECORDER BULB
STEAM SUPPLY LINE TO HOT WATER TANK
WATER OUTLET
CONTROLLER BULB
DIAPHRAGM MOTOR VALVE
STEAM OUTLET HEATING COILS
STEAM INLET TO HEATING COIL
V-151
C.J. TAGLIABUE MFG CO
BROOKLYN N.Y.
5-16-24
TAG DUOFOLD TEMPERATURE, TIME CONTROLLER AND TWO-PEN RECORDER APPLIED TO WAX MELTING PAN AND HOT WATER TANK FOR TEMPERATURE CONTROL

GUESTS OF GRAVER CORP.

CHICAGO, March 21.—Visitors at the convention of the National Petroleum Marketers' Association here will be guests of the Graver Corp. at the Graver frolics at 9:30 o'clock Tuesday evening, April 7.

A. O. M. A. Convention for Expansion

President A. J. Callaghan and Secretary H.G. James Re-Elected. Dr. Alderson Talks of Shale Oil and W. F. Davis on Prices

By Neil Williams

KANSAS CITY, Mo., March 20.—Electing a new set of officers, excepting president and secretary, making two changes in the board of directors and choosing six additional members, the American Oil Men's Association at its Kansas City convention, which closed yesterday, carried out recommendations of the retiring officers and directors that the organization remove its membership classification and become more representative of the petroleum industry of the country.

The only two officers reelected were A. J. Callaghan, president of the American Oil Corp., Jackson, Mich., as president, and H. G. James of Chicago as secretary and manager. The new officers for the ensuing year, as picked at the convention, will be: J. P. Howe, president of the Manhattan Oil Co., Kansas City, Mo., first vice president; Sheldon Clark of the Sinclair Refining Co., Chicago, second vice president; G. I. Sweney, president of the Sweney Oil & Gas Co., Peoria, Ill.; third vice president, Warren Keith, president of the Keith Oil Corp., Brockton, Mass., fourth vice president, and J. M. Carson of the Mid-Continent Petroleum Co., treasurer.

In keeping with the new policy of the association to become more of a national organization, expansion of the board of directors from 30 to 36 members was authorized by the delegates at the request of the retiring officers. Of the new board, 12 members are holdovers, 16 were reelected while 8 are new members.

The new members of the board are: G. T. Wofford of the Wofford Oil Co., Birmingham, Ala.; Warren Keith of the Keith Oil Co., Brockton, Mass.; Charles W. Ralph, Union Oil Co., Los Angeles, Calif.; L. S. Collins, president of the Collins Oil Co., Knoxville, Iowa; A. W. Kiefer, president Meridian Oil Sales Co., Lincoln, Nebr., W. F. Davis, vice president and general manager of the Orient Petroleum Co., Wichita Falls, Tex.; W. H. Barber of the W. H. Barber Co., Minneapolis, Minn., and H. T. Bayard of the Ennis-Bayard Petroleum Co., Chicago. Mr. Collins and Mr. Barber were first and third vice presidents, respectively, the last year, while Mr. Bayard was treasurer.

Other Members of Board

Members of the board reelected are: W. E. Anderson, Winona Oil Co., Winona, Minn.; W. S. Bilby, B. & L. Oil Co., Fairbury, Nebr.; John Burke, Supreme Oil & Refining Co., Indianapolis, Ind.; J. M. Carson, Mid-Continent Petroleum Corp. (Cosden & Co.), Chicago; Sheldon Clark, Sinclair Refining Co., Chicago; L. L. Coryell, L. L. Coryell Sons, Lincoln, Nebr.; C. A. Gustafson, Gustafson Co., Chicago; A. T. Locke, Chicago; E. R. Perry, Mid-Continent Petroleum Corp. (Cosden & Co.), Tulsa, Okla.; E. D. Richardson, Richardson Lubricating Co., Quincy, Ill; George N. Moore, Moore Refining Co., Chicago; Carl Shapiro, Northern Oil Co., Virginia, Minn.; Smith Oil & Refining Co., Rockford, Ill.; G. I. Sweney, Sweney Gasoline & Oil Co., Peoria, Ill.; J. J. Theisen, Sieber Oil Co., St. Joseph, Mo.; E. E. Grant, General Oil Service Corp., Chicago.

Members of the board whose terms did not expire this year are: John T. Berry, Home Oil Co., Kansas City, Mo.; D. E. Buchanan, Chestnut & Smith Corp., Tulsa, Okla.; Fred G. Clark, Cleveland, Ohio; H. C. Cummins, Shaffer Oil & Refining Co., Chicago; W. H. Gray, Tribes Gasoline Co., Tulsa, Okla.; Richard Heil, Commercial Oil Co., Cleveland, Ohio; H. G. James, Chicago; J. P. Howe, Manhattan Oil Co., Kansas City, Mo.; Homer Johnson, Johnson Oil Refining Co., Chicago; W. L. Kistler, Producers & Refiners Corp., Chicago; E. E. Schock, Santa Fe Springs Refining Co., St. Louis, Mo.; M. G. Billingslea, White Star Refining Co., Detroit, Mich.

Retiring members of the board are: P. C. Crenshaw, Home Oil Co., Chicago, and C. H. Leassig, The Automobile Gasoline Co., St. Louis, Mo.

Enlarge Membership Scope

Under the new policy of the American Oil Men's Association adopted at the Kansas City convention, all membership clasification will be removed and representatives of all phases of the petroleum industry will be admitted on an equal basis, including producers, refiners, marketers and jobbers, and supply dealers. At present the organization is for marketers and jobbers only. The association indorsed this policy unanimously at its closing session in the form of an amendment to the constitution.

In line with this change, the association also voted unanimously to amend the constitution to enter every State in the Union for membership, thus broadening the scope of the organization into a more national body.

Although the association went on record as commending the work of the Federal Oil Conservation Board, resolutions were passed condemning investigations of the petroleum industry which have as their ultimate purpose to regulate the price of petroleum and its products.

Sentiment throughout the convention against State taxes on gasoline sales was brought to a head at the closing session Thursday when a resolution, branding the levies as unfair to the oil industry and a burden on motorists, was passed urging all members of the association to use all their influence possible on State officials against the taxation.

Members of the Federal Oil Conservation Board will be asked by the American Oil Men's Association to visit personally all the oil fields of the country and learn first hand, through public meetings and observation, what actual conditions are in the petroleum industry instead of relying on statistics and information furnished by others.

Employ Field Secretary

One of the practical results of the convention was the authorization of the board of directors to employ a field secretary to carry the work of the association into every State and build a powerful organization of oil men. The entire policy of the association in the future will be to put the organization on a more practical and working basis, Mr. James, the secretary and manager, explained during the convention.

As a step toward this and in line with the thought of several speakers during the convention urging simplification of methods, the operating force of the association in the future will be vested in the executive committee instead of the board of directors. Mr. James explained that the executive committee, being the smaller body, could be brought together much easier to transact the business.

In connection with the expansion of the scope of the association, the convention voted to increase the membership in the executive committee from 6 to 11 in order to represent more territory. The executive committee remains to be chosen.

Putting the petroleum industry on a more level and substantial basis, establishment of a higher standard of business practices, building of a greater demand for oil and its products and working conditions, both for employers and employes, were the keynotes of the addresses delivered during the convention.

Convention Optimistic

A feeling of optimism which prevailed at the convention and a confidence that the petroleum industry would be able to solve its many problems satisfactorily were focused in the address of the president, Mr. Callaghan, at the opening session following a luncheon Tuesday noon. Mr. Callaghan's address was covered in last week's issue of The Oil and Gas Journal.

Tuesday evening of the convention was left open for private social meetings and for members of the association to become more acquainted with others and their guests.

Wednesday, the second day of the convention, was a full day for the association. Starting at 10 o'clock in the morning, the convention was in session almost continuously until 6 o'clock that evening, allowing the members only enough time to prepare for the annual banquet of the association Wednesday night.

Among speakers Wednesday were W. F. Davis, vice president and general manager of the Orient Petroleum Co., Wichita Falls, Tex.; Paul B. Erickson of the Golden Rule Refining Sales Co., Wichita, Kans.; Isiah Hale, superintendent of safety of the Santa Fe Railroad; A. W. Kiefer, president of the Meridian Oil Sales Co., Lincoln, Nebr.; George A. Moore, general manager of the Detroit

CALIFORNIA OIL FIELD OPERATIONS FOR FEBRUARY, 1925

According to figures collected by the American Petroleum Institute, Pacific Coast office, the total production of crude oil in California for February amounted to 16,869,833 bbls., an average of 602,494 bbls. per day. This is a decrease of 2,128 bbls. per day under January production.

Total stocks of crude and all products in Pacific Coast territory increased during the month 1,326,840 bbls. The total stocks at the end of the month were 129,334,610 bbls. The total stock increase for 1925, up to February 28, was 4,312,646 bbls. Comparative figures as of August 31, 1924, January 31, 1925, and February 28, 1925, are shown in detail on the second page of this report.

Sixty-five wells were completed during the month with an initial daily production of 28,170 bbls., compared with 62 wells completed during January with an initial production of 21,286 bbls.

PRODUCTION

(Figures for production and stocks are in barrels of 42 gallons.)

District—	Barrels per Month	Daily Average Feb., 1925	Jan., 1925	Feb., 1924
Kern River	499,749	17,848	17,783	19,045
McKittrick	159,705	5,704	5,729	5,851
Midway-Sunset	2,915,998	104,143	105,918	95,179
Elk Hills	1,056,663	37,738	37,019	36,942
Lost Hills-Belridge	142,111	5,075	4,957	3,502
Coalinga	631,069	22,538	22,402	21,746
Wheeler Ridge	29,689	1,060	1,050	894
Watsonville	1,610	57	58	57
Santa Maria	207,345	7,405	7,527	7,963
Summerland	4,064	145	146	146
Ventura-Newhall	575,401	20,550	13,776	9,798
Los Angeles-Salt Lake	61,196	2,186	2,091	2,913
Whittier	57,578	2,056	2,200	2,019
Fullerton	328,008	11,715	12,007	10,850
Coyote	551,901	19,711	20,242	4,066
Santa Fe Springs	1,403,924	50,140	49,554	105,742
Montebello	539,942	19,284	19,428	18,542
Richfield	303,930	10,855	11,278	12,786
Huntington Beach	1,145,455	40,909	41,673	59,835
Long Beach	3,318,077	118,503	122,297	219,013
Torrance	1,160,176	41,435	41,788	27,597
Dominguez	1,420,109	51,075	56,982	1,443
Rosecrans	332,691	11,882	8,495	.....
Inglewood	13,442	480	223	.....
Total	16,869,833	602,494	604,622	666,939
January	19,341,226	604,622		
Decrease	2,471,393	2,128		

STOCKS

	Feb. 28, 1925	Jan. 31, 1925	Feb. Stock Increases	Aug. 31, 1924
Heavy crude, heavier than 20° A.P.I., including all grades of fuel	58,714,880	57,858,955	855,925	52,762,616
Refinable crude, 20° A.P.I., and lighter	42,629,850	42,262,361	367,489	41,041,685
Gasoline	12,058,682	11,748,056	310,626	9,860,466
Naphtha distillates	7,888,410	8,652,085	*763,675	11,863,787
All other stocks	8,042,788	7,486,313	556,475	5,589,973
Total all stocks	129,334,610	128,007,770	1,326,840	120,818,527

*Decrease.

DEVELOPMENT

District—	New Rigs Up	Active Drill'g	Compl'd	Daily Initial Output	Active—Prod'g	Aban'd Wells—Drillers	Prod'rs
Kern River	1	2	2	75	2,164	1	1
McKittrick	..	9	2	296	299	...	...
Midway-Sunset	17	61	19	2,876	2,980	...	1
Elk Hills	3	8	3	391	263	...	...
Lost Hills-Belridge	..	2	...	.....	219	...	1
Coalinga	2	6	...	.....	1,039	...	...
Wheeler Ridge	1	5	...	.....	15	...	...
Watsonville	..	..	...	.....	6	...	...
Santa Maria	1	6	1	125	302	1	...
Summerland	..	..	...	.....	135	...	...
Ventura-Newhall	7	34	5	7,278	561	...	...
Los Angeles-Salt Lake	..	1	...	.....	196	...	10
Whittier	1	8	1	25	141	2	...
Fullerton	3	4	...	.....	290	1	1
Coyote	..	3	...	.....	231	..	...
Santa Fe Springs	..	2	...	.....	363	1	...
Montebello	1	4	1	48	159	...	...
Richfield	..	12	...	.....	174	...	...
Huntington Beach	3	15	3	251	312	1	...
Long Beach	..	19	7	2,407	528	5	1
Torrance	11	20	7	802	544	6	4
Dominguez	..	21	6	7,599	50	...	...
Rosecrans	15	56	6	4,677	29	...	...
Inglewood	7	11	2	410	6	...	...
Miscellaneous drilling	7	103	...	.....	.....	10	...
February	80	412	65	28,170	11,446	28	19
January	77	429	62	21,286	11,380	25	10
Increase	3	*17	3	6,884	66	3	9
Average for year 1924	103	510	103	42,412	10,903	28	21
Average for year 1923	111	759	82	114,690	8,928	24	
Average for year 1922	115	605	67	43,700	9,410	17	
Average for year 1921	90	536	57	15,631	9,425	14	
Average for year 1920	77	403	49	14,125	9,299	13	

*Decrease.

Range, Boiler & Steel Co., Detroit, Mich.; R. M. Hudson, chief of the Division of Simplified Practice of the Department of Commerce at Washington, D. C.; Theodore A. Peck, chief engineer of the Pierce Petroleum Corp.; Dr. Victor C. Alderson, president of the Colorado School of Mines, Golden, Colo.; J. A. Glimore, secretary of the Michigan Independent Oil Men's Association; George S. Allee, secretary of the Missouri Oil Men's Association, and Archibald Campbell, oil operator and member of the Wyoming Legislature.

Day of Oil Shale Soon

One of the speeches which caused the most comment at the convention was that of Dr. Alderson of the Colorado School of Mines on "Status of American Shale Oil Development." Dr. Alderson declared that the day of manufactured oil is just ahead of the world. He predicted that production of natural production soon would decline below the needs of the world and that the people would have to look to some new source of oil, which he claimed would be oil shale.

Dr. Alderson pointed out that the world supply of oil shale is beyond mathematical computation and that when natural crude reaches a price of $2.50 a barrel, manufacture of oil from shale on a commercial basis will be profitable. Dr. Alderson continued:

"The oil shale of Colorado and Kentucky each contains four times as much possible oil as is now estimated to remain in all the underground pools of the United States. The combined deposits of Colorado, Utah and Wyoming contain 29 times as much oil as the combined past and possible future production of oil in the United States. If 100 plants, each treating 2,000 tons of oil shale a day, were operating in Colorado alone they could not exhaust the easily available amount of oil shale in 800 years."

Mr. Davis' speech was on "Safety versus Gambling in Petroleum Operations." He blamed most of the failures in the petroleum industry to bad management and explained that management is bad because it indulges in many forms of gambling. He said in part:

Speech of W. F. Davis

"The producer with small capital too often bets his wad on a wildcat well and goes broke. He doesn't stop to figure the small percentage of producers among wildcat holes and contents himself with splitting his money, joining others in his prospecting and taking proportionately as many smaller interests. If the ratio is 1 producer to 49 dry holes, my theory is he should split his money into 50 parts and take 50 chances of a one-fifteenth interest in each wildcat. Or if, as in North Texas proven territory, the ratio is two-thirds to three-fourths producers, he should divide his money into four parts. join others for the balance of the cost in each case, pay the necessary price for acreage and put down four wells—always playing offset wells. He could then fairly expect to win before his money gives out.

"The refiner in the first place is too apt to bet that he has to make a contract over a year to pay the producer a premium of—say 25 cents—above the posted price of some pipe line company, over whose actions he has no control, in order to get his supply of crude. On this bet he loses most of the premium from six to nine months of each year and wins a trifle of 5 to 10 cents a barrel for about one or two months of the year. Whereas a contract to take the producer's oil every day in the year, and pay the spot price, either above or below the posted price, will get the oil and keep both parties in a good humor. He can do this and make money, because no one is apt to pay a spot price which would absorb all profits and put him in the red.

"Again the refiner too often bets with a jobber or consumer that he can afford to deliver him a product over a year at—say 4½ cents for gasoline—below some posted tank wagon price over which he has no control. The result generally is that when the contract price is below the market, the business goes along smoothly, but when the contract is above the market, the commodity goes at once off specifications, precipitates floods of water to the bottom, and many inches seem to get out at the top. But I must state in fairness to some buyers that this rule does not apply to all.

Base Price on Crude Cost

"A better way to keep customers and maintain friendly relations with them is to base prices on crude cost. or to incorporate in the sales contract a clause providing that it shall not operate to cause a loss to either party, or that under certain conditions prices are to be readjusted and agreed upon, or that the contract shall become and remain suspended during the continuance of such conditions.

"During periods of slow movement, some—and I might say many—refiners bet that they can take a competitor's business away from him by giving large discounts, or delivering more goods than he bills and collects for, or by openly cutting the price, and getting by with it. In most cases he hasn't considered the corpulence or metal of his competitor, and he is generally forced to take a series of similar discounts or cuts until he finds himself unable to realize sufficient funds from the sale of his products to meet his crude bills, and then commences yelling about the other fellow cutting the price. The better way is to make a uniformly satisfactory product, as good or a little better product than that of your competitor, figure correctly the cost, and if you are not salesman enough to sell your products on their merit and above their cost, without cutting a competitor's fair and reasonable price, the better way for the interests of your own company and the industry as a whole, as well as the satisfaction of the public at large, would be to resign and enter some other line that you may be competent to do in a businesslike manner.

"In general the surest and only road to success in the oil, or any other business, is to compromise quality for nothing, and efficiency for nobody—not even for yourself, if you would honestly serve the interests of your company and your own investment in it."

Retail Marketing

Mr. Erickson, who spoke on "Retail Marketing of Gasoline," advised the elimination of much of the duplication in the marketing of gasoline, explaining that the tendency toward such a great number of filling stations in the country only causes a waste of money and effort. He expressed the opinion that half the filling stations should be replaced with buildings of some public use.

Mr. Erickson branded most gasoline "dopes" as useless and advised against their use. Individuality in gasoline was another point stressed by Mr. Erickson. He suggested that each company give its gasoline a trade mark and advertise it.

Mr. Hale of the Santa Fe railroad spoke on the subject "Injuries in Industries." His main point was that if an employer sees to it that his employes have happy homes, that they think, and think straight, he will have little need to worry about accidents.

The value of system in conducting the business of oil companies was stressed in the speech on "The Value of System," by Mr. Kiefer. Mr. Moore talked on "What an Oil Man Should Know About a Steel Barrel," bringing out that the oil barrel business and the petroleum industry are closely interlocked. Parts of Mr. Hudson's talk on "Elimination of Waste Through Simplification and Standardization" were published in last week's issue of The Oil and Gas Journal.

Mr. Peck, who talked on "Automobile Lubrication," gave a brief resume of the development of lubricating systems in automobiles, while Mr. Campbell urged that oil men take more interest in politics and see to it that they have representatives in the various legislatures to defeat unfair legislation.

Wednesday's sessions were climaxed with the annual banquet and dance of the association. It was considered one of the most attractive entertainments ever given by the American Oil Men's Association. During the banquet, the guests were entertained with dancing and musical features given by the Kansas City Petroleum Club. The banquet was held at the Kansas City Athletic Club, where all sessions of the conventions were conducted.

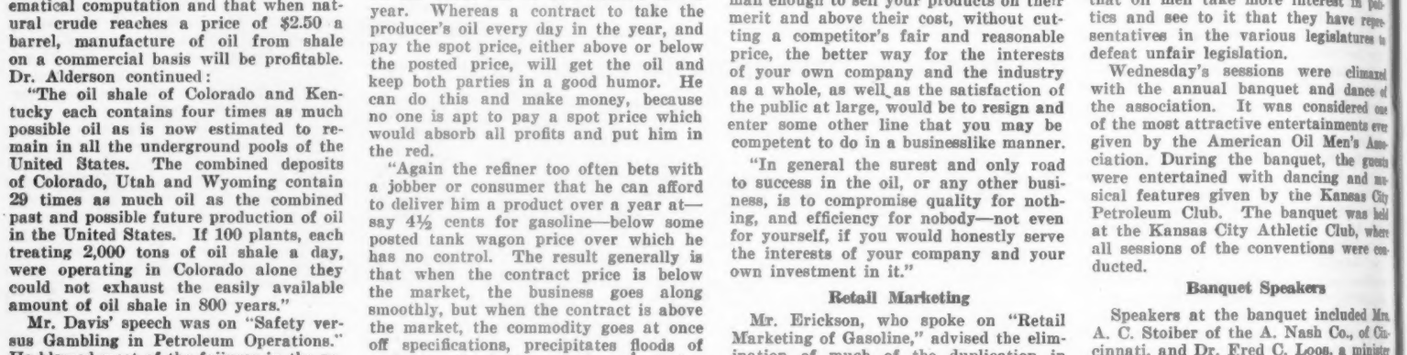
Banquet Speakers

Speakers at the banquet included Mr. A. C. Stoiber of the A. Nash Co., of Cincinnati, and Dr. Fred C. Loos, a minister at Liberty, Mo. Both talks were on social problems.

In addition to the business session, which closed the convention Thursday, addresses were delivered by R. M. A. Anderson, Chicago architect; Alph M.

(Continued on Page 176)

PRACTICALLY ABANDONED FARM AND OLD TOWNSITE YIELDING THOUSANDS IN ROYALTIES



The Westbrook Pool, Pawnee County, Okla. —Photo by Ward, Tulsa.

A practically abandoned homestead, including a townsite which never materialized into the thriving farming community which was the dream of its founder, is now the source of thousands of dollars in royalties as the result of the discovery of oil and the development in the Westbrook Pool in Pawnee County, Oklahoma. The story of this small tract of land reads like some of the fiction which has been written about the oil industry where the "gusher" came in just in time to save the old home from falling into the sheriff's sands to satisfy a mortgage.

In 1893 when the Government was granting homesteads of 160 acres in the West, Daniel West of Clinton County, Ohio, made an application for one of the Government tracts and received a grant of 160 acres in Pawnee County, Oklahoma. With his wife and seven children, he moved to the site and built a small home for himself and family. It was a hard struggle to make enough to provide the family with the bare necessities of life. When a railroad extended its line somewhere near the homestead, Mr. West conceived the idea of laying out a townsite, hoping to make enough from the lots to aid him eke out an existence from the farm.

Mr. West laid out 40 acres of his homestead in town lots, calling the place Westbrook. He sold some of the lots but the real estate business along that line in that section was mighty dull and it was hard sledding. His farm did not produce very much and after a period of years, Mr. West died. The townsite proposition failed to materialize and was never dedicated. Taxes became delinquent and the members of the West family felt it was throwing good money after bad to try to keep up tax payments on the land which had yielded them so little and which had been the scene of such a hard struggle.

The family scattered and left the old homestead.

In the meantime someone had paid taxes on part of the property at least and when the oil development moved in that direction, tests were drilled on the old 40 acres which had been laid aside originally as a townsite and also on the remaining 120 acres which has comprised the West homestead. Oil was discovered.

J. A. Turner of Hallett, Okla., became familiar with the situation and as a result of his efforts, members of the West family gathered together, it being the first time the family had a reunion since 1899. The result of the meeting was the institution of legal proceedings to regain possession of the old homestead. It was decided first that as the townsite had never been dedicated, the part laid out for streets and alleys belonged to the West heirs because this part had not been laid out in the lots. The question of ownership of the 120 acres outside of the townsite is still in litigation, it is said.

But from the part of the old townsite which was awarded them by the courts, including some lots which had not been sold, the West heirs are receiving large sums in royalties from the oil being produced. The royalties from their part of the townsite alone totaled $7,500 the first four or five months. The royalty on the 120 acres is said to amount to $2,000 a month.

York Creek Test in Guadalupe County May Mean New Pool

SAN ANTONIO, Tex., March 21.—The Gulf Production Co. spudded in Wednesday on the Beaty tract, an offset to No. 1 Brewer of Lefevre & Storey in northeastern Caldwell County, which was brought in March 8, making the first day about 150 bbls. and now making close to 80 bbls. daily.

The Gulf's test is 150 feet southeast of the line that divides the Gomillion tract on which the Sun Oil Co. has a lease from the Beaty and Brewer tracts on the southeast. The Brewer well is 300 feet southeast of the line. Brewer is 150 feet northeast and the Gulf's test is 150 feet southwest of the line dividing the Brewer tract from the Beaty. The Sun Oil Co.'s test on Gomillion is 150 feet northwest of its lease line and 300 feet to the northeast of the Brewer well. They are not direct offsets.

Interest switched the past week to the York Creek Oil Co.'s test on the Fulsher tract a mile north of the Guadalupe County end of the Luling Field, which is rated as a 100-bbl. well at a depth of 2,060 feet and with a 40 gravity oil that would indicate that it has discovered a distinct pool from the Luling Pool. The well was first considered too close to the Luling Field for it to be on a separate structure or fault line and too far away for extension and hence the scouts have given it but scant attention. The oil is a higher gravity than that in the Luling Field. The well was drilled in on Friday, March 13, and bailed for a couple of days without results. Then it was drilled a little deeper and bailed again and came in today. It does not flow. There are dry holes between it and the Luling Field. It is believed to be in the Edwards lime, which is the producing formation at Luling, and it suggests possibilities of opening a new pool. It is south of the junction of York Creek with the San Marcos River.

Operators Still Optimistic

Though No. 1 Gib Springs of C. N. White, south of Seguin, in which the Roxana Petroleum Corp. has a half interest, was bailed the last week without encouraging results and is being drilled deeper, the faith of operators that more pools will be opened in the Edwards still lives. Derrick is up and a test will spud in within a few days on the Oscar Vogel farm in the Ephraim Bollinger survey No. 27 in Guadalupe County about midway between the Dixie Oil Co.'s dry hole on the Cibolo River to the southwest and the Gib Springs test south of Seguin on the northeast.

The Roxana Petroleum Corp. contributed the acreage and several of the major companies, Atlantic, Rycade, Gulf, Texas and Sun are contributing to the test. It will be an Edwards lime test.

J. M. Davis and others have abandoned at 2,060 feet No. 1 Koch, west of the Cibolo River, and a short distance west of the Dixie's dry hole in the Edwards.

Lefevre & Storey-Marland Oil Co.'s deep test in the Somerset Field is nearly through the Austin chalk, which they topped at 1,420 feet. It is on the Binz tract and just to the north of the nearest shallow production. They believe they have encountered the Austin about 200 feet high.

The Humble Oil & Refining Co., after several weeks' fishing at a depth of a few hundred feet on the Kincaid Ranch in the southeastern corner of Uvalde County, is skidding over and will start a replacement well. It is its second test in pure wildcat country.

Continental Oil Co.'s No. 1 Pryor, on the Pryor ranch north of the town of La Pryor in Zavala County, spudded in but recently, is drilling at 625 feet in hard sand stone and with plenty of pyrites of iron and carrying down a 13½-inch hole. Old Dominion, just south of it, on the same ranch, is at 3,500 feet after two weeks spent in getting the bailer out of the hole.

Dixie Oil Co.'s No. 1 Manton, in Fayette County, south of the fault line, exposed in the Colorado River and 2 miles north of LaGrange, has been abandoned at 2,537 feet after penetrating three sands that carried no water but had some showings of oil and gas. The rig is being skidded to the north side of the fault line and another test will be started.

E. H. Stickney in northeastern Atascosa County has abandoned No. 1 Lemmberg at 841 feet on the advice of the geologist, based on the log of the well that it is too close to the fault. Derrick and rig are being skidded a half mile west and will spud in No. 1 Hug.

Other Operations

Independent operators have set 2,450 feet of 8¼-inch casing in No. 1 Whitehead in Val Verde County north of Del Rio, and are resuming drilling again for a deep test.

Clark & Humphreys have a location made in Wilson County for No. 1 Testo, 4 miles southwest of Floresville and the derrick will go up the coming week. Garrett has cored No. 1 Houck, 9 miles southwest of Floresville at 1,200 feet and got an asphalt showing and has secured 1,500 feet more of drill stem and will resume drilling.

C. E. Mahone in another Wilson County deep test completed a big derrick and rotary rig on the Green farm, 3 miles west of Floresville and has spudded in. Douglas & Thomas, in Wilson County, south of Carpenter a short distance, have stopped at 1,950 feet to drill a water well. Operations throughout southwest Texas are greatly delayed by lack of water for drilling.

Two deep tests have been started in the Calliham shallow field in McMullen County west of Three Rivers. Lightfoot's No. 5 Lark, north of the Frio River, is at 1,008 feet and on a rock, and Old Ocean Oil Co.'s No. 1 Brown, south of the Frio, is on a rock at 1,075 feet. Shallow production is at 750 feet.

Humble Oil & Refining Co., drilling in southern McMullen County, near Loma Alta on land it owns in fee, is down around 2,400 feet and encountered little of anything but gumbo.

Plateau Oil Co. and Texas Pacific Coal & Oil Co., joint owners of the gas field along the Live Oak-San Patricio County line, with two big gassers completed, have made the location for their third test. No. 1 S. G. Miller, which will be a half mile west of the first two. In No. 1 Patteson, several miles northwest of their gassers, they are drilling at 2,895 feet with nothing encouraging. They will not continue drilling much further unless there is a change in formation. Gas in the field to the east is found at 2,380 feet.

Simms Petroleum Co. has abandoned both its wildcats in Jim Wells County near Sandia, No. 1 Wade at 2,966 feet and No. 1 Brummer at 2,755 feet.

Plateau's Wilson County test is at 2,750 feet.

JAMES W. GREEN DIES

PITTSBURGH, Pa., March 21.—James W. Green died at his home here this week, aged 79. Soon after the close of the Civil war the tales of the new "oil regions" attracted him and he entered the service of the old Mutual Pipe Line Co., as a gauger, in 1869, continuing until the consolidation of the pipe lines in 1877 when he became one of the "United's" force. In the early eighties he was a construction foreman builder on the lines to the seaboard and from 1883 to 1887 was superintendent of the New York & Bayonne division of the New York Trunk lines. Leaving the pipe lines service he reentered the business again in 1889 as engineer for the Southwest Pennsylvania Pipe Lines, until he was placed upon the annuity roll in 1916.

AUSTRALIAN ANGLO-PERSIAN

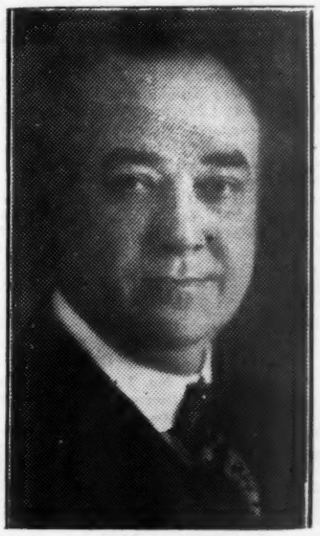
The Anglo-Persian Oil Co., Ltd., has organized an Australian subsidiary with capital of £100,000.

Grant C. Stebbins, Great Oil Pioneer, Is Taken by Death

The death of Grant C. Stebbins of Tulsa, president of the Gladys Belle Oil Co., which occurred in the Christian Hospital in Kansas City Saturday, March 21, removed an outstanding examplar of the type of men who have made it possible for the American oil industry to keep ahead of the demands made upon it by a world hungry for oil products.

Although the two men differed temperamentally and physically, Grant Stebbins and Theodore N. Barnsdall were alike in that they had few, if any, peers as pioneers or wildcatters in the oil business. When death took Barnsdall, who had since the early '80s stood as the greatest of wildcatters, he had a fitting successor in Grant Stebbins, and the names of the two men will long be remembered and their memories held reverently for the work they did in the development of a great industry.

Grant C. Stebbins was 62 years of age when he passed away. He had been in failing health for two years and recently, in the last hope of saving his life his left leg was amputated in the hospital in Kansas City. He rallied for



Grant C. Stebbins

a time and then sank back into a hopeless condition.

Mr. Stebbins was born in Marseilles, Ill. He came to Tulsa in 1904 when it was a town of 3,000 people without a gas supply. Stebbins and others organized the Cherokee National Oil Co. and went out after gas. They found it west of the city and after securing a franchise to distribute the supply, they sold their holdings to a company with more capital. Thereafter Stebbins' life was made up largely of wildcatting operations. Like Theodore Barnsdall he was less interested in the production he found than he was in the search for it. His organization developed the properties while Stebbins went out ahead and found new production or satisfied himselt it was not there. He drilled 28 consecutive dry holes and on the long road of discouragement which few men could have traversed without falling by the wayside Stebbins continued with wonderful courage and always with hopefulness. His discovery of the Perryman Pool near Jenks in 1912 was a ten strike that spurred him on and his persistent buying of acreage in scattered places resulted in his company "sitting in" when other wildcatters opened pools. Thus the Gladys-Belle Oil Co. figured prominently in the development of a number of important pools in Oklahoma, especially in Tulsa, Okmulgee, Okfuskee and Hughes Counties.

Mr. Stebbins wildcatted in Texas, Arkansas, Montana and Wyoming. Very recently some old acreage bought by him in the Yeager district in Township 8-10, Hughes County, Oklahoma, was successfully tested out by the Dixie Oil Co., giving Stebbins' company three valuable offset leases.

He was always one of the most public spirited of Tulsa's citizens and was responsible in a large measure for the growth and beauty of the city of his adoption.

Deceased is survived by his wife and four children, Ray Stebbins, Mrs. Ralph Darnell, Mrs. Otis McCltntock and Miss Louise Stebbins, all of Tulsa.

The funeral and burial were held in Tulsa on Tuesday.

MARKET IS SLUGGISH NORTH TEXAS REPORT

FORT WORTH, Texas, March 23.—The refined oil market in North Texas is thoroughly demoralized. At least that is the contention of a great number of refiners and marketers, but there are some who hold the situation is not nearly so bad as it appears on the surface, that a calm analysis of conditions warrants a far better attitude than is being shown by most of those interested.

While it is true gasoline is from ¼ to ¾-cent lower than it was quoted last week and other refined products are correspondingly lower in most cases, the more optimistic refiners and marketers contend a broader view should be taken of the market, in other words that it should not stop abruptly with a comparison of conditions as they existed a few weeks ago.

The gasoline market is sluggish, for the very simple reason that there is not enough material moving to make a really active market. United States motor gasoline is now quoted at 10½ to 10¾ cents and 64-66, 375 end point gas is being quoted at 13½. There is a very limited demand and the trade generally is not very hopeful of any immediate improvement unless with an early advance in crude, which appears doubtful.

Kerosene prices are unchanged. The 41-43 water white product is quoted at 4½ to 4⅝ cents and prime white kerosene is steady at 4¼ to 4½ cents. However, there seems to be a very light demand.

While the fuel oil market softened a little there is some prospect of a stiffening on this product. Refiners report inquiries from the Arizona mining districts, the first from this branch of trade in many months. A fair volume of business from Arizona and a solution of the water shortage in the drilling districts of North Texas would materially help the fuel oil situation. There is still a serious shortage of water for drilling purposes over much of North Texas, which naturally is reflected on the fuel market. Prices on gas oil in this territory are unchanged quotations for 32-36 gas oil being 3½ to 3⅝ cents.

The market on natural gasoline is extremely sluggish probably as a result of the slow movement of gasoline from refineries. There is a very limited movement of natural gasoline. Prices on grade A are 9½ to 10 cents, while grade B is being quoted at 8¾ to 9 cents and grade C at 8¼ to 8½ cents.

Suspension of operations were reported by at least two of the independent refining plants in the Wichita Falls district during the week and definite statements were made that at least one other would suspend operations immediately unless there was an improvement justifying continuing operations.

REPAIR PRICE NOT OVER $6

In the advertisement of the Wico Electric Co., appearing on page 7 of the March 19 issue of The Oil and Gas Journal, a typographical error was made in the amount of the charge for repairs, it being stated, "No charge will exceed $5.00 providing the damage is due to wear and tear." The correct price is $6.00 and the sentence should have read, "No charge will exceed $6.00 providing the damage is due to wear and tear." The correct advertisement appears on page 29 of this issue.

A. O. M. A. CONVENTION FOR EXPANSION

(Continued from Page 174)

Honnet, director of the petroleum division of the Southwestern Advertising Agency, Dallas, Texas, and A. V. Bourque, secretary of the Natural Gasoline Manufacturers' Association, Tulsa, Okla.

Mr. Anderson, who talked on "Art and Architecture in Petroleum," urged oil companies to pay more attention to the style of architecture used in their filling station and recommended that each company adopt a style as universal for all its stations.

"The oil industry should spend its energies developing avenues of petroleum consumption," Mr. Honnet declared in his address on "Contribution of Equipment Organizations to Petroleum Development." He pointed out that oil companies should follow the example of gas and electric light distribution companies in inventing all kinds of appliances for the use of their products. He suggested that the uel oil burner was a line on which the oil companies might bend its energies.

A recommendation by Mr. Honnett that merchandising and salesmanship of gasoline and oil should be developed as much as in any other line of business and that courses in salesmanship for all filling station operators be inaugurated was taken up quickly by the association when resolutions were passed authorizing officers of the association to start work immediately on an organized campaign of education.

Mr. Bourque's address on "Better Gasoline," which pointed out the strides which have been taken in the manufacture of gasoline was published in last week's Oil and Gas Journal. His speech was the closing one of the session before the Thursday luncheon and business meeting.

A total of 250 oil men registered at the convention during the three days. They were guests of the Kansas City Athletic Club and the Kansas City Petroleum Club at many special entertainments throughout the convention, including a golf tournament Thursday afternoon. The women attending the convention were taken on sightseeing tours about the city, to the theaters and to various parties and dances. In addition to providing these entertainments, the Petroleum Club provided special music at all regular convention sessions and luncheons.

The next convention, as was reported in The Oil and Gas Journal last week, will be held at Chicago, Tuesday Wednesday and Thursday of the third week in March next year.

NORTH CENTRAL TEXAS

(Continued from Page 32)

Waggoner cleaning out at 2,108 feet; Atlantic Oil Production Co.'s No. 1 Waggoner, spudding; No. 1 Zipperle, drilling at 995 feet; No. 2 Zipperle at 935 feet; Barkley and others' No. 2 Stephens at 850 feet; Beatty and others' No. 1 Waggoner, spudding; Bridwell and others' No. 2 Dill, drilling at 2,040 feet; No. 7 Stephens at 1,950 feet; No. 8 Stephens at 1,100 feet; No. 1 Waggoner at 1,320 feet; Texas Pacific Coal & Oil Co.'s No. 1 Waggoner at 1,700 feet; Burton and others' No. 1 Castlebury at 1,610 feet; No. 1 Zipperle at 400 feet; Burton and Ruffs' No. 1 Waggoner at 1,350 feet; Continental Oil Co.'s No. 2 Zipperle at 650 feet; No. 3 Zipperle, underreaming; Wood and others' No. 1 George, drilling at 1,300 feet; Hamilton and others' No. 1 Neal at 1,802 feet; Hoffer Oil Corp.'s No. 1 Waggoner, setting casing at 1,780 feet; McKanna and others' No. 1 Waggoner, spudding; Magnolia Petroleum Co.'s No. 7 fee, drilling at 1,000 feet; No. 1 Moore-Waggoner at 325 feet; Maxwell and others' No. 1 Morris at 350 feet; Murchison and others' No. 1 Waggoner, fishing at 775 feet; Oxford Oil Co.'s No. 2 Waggoner, underreaming; Priddy and others' No. 1 Castlebury, coring a sand at 2,214 feet; No. 3 Castlebury, drilling at 650 feet; Ray and others' No. 7 Bond, at 2,055 feet; No. 8 Bond at 1,210 feet; Simms Oil Co.'s No. 1 Collins at 400 feet; South Vernon Oil Co.'s No. 3 Stephens at 1,640 feet; No. 7 Stephens, underreaming; No. 16 Stephens, spudding; No. 19 Stephens drilling at 400 feet; Staley and others' No. 1 Bond, spudding; No. 4 Stephens, drilling at 550 feet; No. 5 Stephens at 450 feet; The Texas Co.'s No. 1 Owens, spudding; No. 202 Waggoner, underreaming; Texhoma Oil & Refining Co.'s No. 1 Bettes, drilling at 1,845 feet; Texhoma & Holmes' No. 1 Thomas at 1,100 feet; Wells and others' No. 5 Waggoner, fishing at 640 feet; Winnipeg Oil Co.'s No. 6 Bond at 2,000 feet; No. 7 Bond at 300 feet; Wood and others' No. 1 Streit at 2,198 feet; Humble Oil & Refining Co.'s No. 3 Castlebury, underreaming; No. 10 Castlebury, drilling at 1,260 feet; No. 11 Castlebury at 645 feet; No. 12 Castlebury at 690 feet; No. 1-C Waggoner, underreaming; Key and others' No. 1 Waggoner, drilling at 1,503 feet; Knight and others' No. 1 Waggoner at 1,210 feet; Kolp and others' No. 3 Waggoner at 1,020 feet; No. 5 Waggoner at 400 feet; Levy and others' No. 2 Waggoner at 400 feet; No. 1 Waggoner, Block 4, at 400 feet; No. 1 Wheeler at 1,630 feet; Little Oil Co.'s No. 1 Youngblood at 2,200 feet; McCamey and others' No. 3 Richardson at 1,400 feet; No. 5 Richardson at 955 feet; No. 6 Stephens at 1,024 feet; No. 7 Stephens at 1,160 feet; No. 8 Stephens at 1,270 feet; No. 9 Stephens at 1,270 feet; No. 10 Stephens, spudding; No. 12 Stephens, drilling at 940 feet.

Stephens County—Drilling

Cox and others' No. 1 Cunningham is underreaming; Critten and others' No. 8 Cobb, drilling by tools at 3,328 feet; Humble Oil & Refining Co.'s No. 6 Keel, spudding; Interstate Consolidated Oil Co.'s No. 1 Lane, drilling at 2,901 feet; Mid-Kansas Oil & Refining Co.'s No. 11 Atkins account 1, spudding; No. 13 Hill account 1, drilling at 650 feet; No. 15 Hill setting casing at 3,100 feet; Oliver Oil & Gas Co.'s No. 1 Bascom, drilling at 2,400 feet; Pender Production Co.'s No. 5 Keel at 2,206 feet; Rosell Production Co.'s No. 2-B Brown at 1,545 feet; Snowden & McSweeney's No. 5 Higginbotham at 3,175 feet; Sun Oil Co.'s No. 5 Stoker, drilling by casing at 2,275 feet; Texas Consolidated Oil Co.'s No. 5 Martin, drilling at 3,409 feet; Walker and others' No. 4 First National Bank, at 3,150 feet; Barkley and others' No. 1 Pritchard, spudding; Brown & Co.'s No. 2 Akin, drilling at 2,147 feet; Buckeye Pipe & Supply Co.'s No. 1 Pisgah Church, setting casing at 600 feet; Carter and others' No. 2 Langford, drilling at 605 feet; No. 1 Polan at 1,850 feet; Cosley Oil & Gas Co.'s No. 1 Satterfield at 1,385 feet; Curry Pool Oil & Gas Co.'s No. 2 Jones, setting casing at 600 feet; Hughes and others' No. 4 Gandy, fishing at 3,195 feet; Knox & Lewis' No. 1 Flournoy, fishing at 3,870 feet; Landreth Production Co.'s No. 2 Gratz, drilling at 1,700 feet; Magnolia Petroleum Co.'s No. 4 Jones at 2,210 feet; No. 5 Walker at 970 feet; Mook Texas Oil Co.'s No. 2 Head at 2,400 feet; States Oil Corp.'s No. 2 Boles at 3,498 feet; Texas Fidelity Oil Corp.'s No. 8 Gardenshire at 975 feet; Texas Pacific Coal & Oil Co.'s No. 6 Adams at 620 feet; No. 1 Veale, fishing at 4,215 feet; The Texas Co.'s No. 11 Keathley, drilling at 675 feet; No. 41-A Parks at 1,875 feet; No. 42-A Parks at 1,290 feet; Thompson and others' No. 3 Williams at 1,500 feet.

Eastland County—Drilling

Allen and others' No. 1 Elliott, drilling at 1,470 feet; Gholson and others' No. 1 Gholson, at 650 feet; Kirk and others' No. 6 Shugart, at 1,200 feet; Lightfoot and others' No. 1 Allen at 2,800 feet; McLester Oil Co.'s No. 1 Allen at 3,230 feet; Magnolia Petroleum Co.'s No. 8 Hawkins at 2,725 feet; Mook Texas Oil Co.'s No. 1 Williamson at 350 feet; Parsons and others' No. 1 Jones at 1,850 feet; No. 2 Motes, spudding; Porter Development Co.'s No. 1 Downtain, drilling at 1,115 feet; Reclamation Oil Co.'s No. 6 Bond, spudding a new hole; Rosell Production Co.'s No. 1 Rice, drilling at 1,175 feet; States Oil Corp.'s No. 5 Homer at 600 feet; No. 15 Harrell at 1,685 feet; No. 4 Summerall at 1,125 feet; Adams and others' No. 1 Donovan at 1,340 feet; No. 1 League at 528 feet; Burkett and others' No. 1 Robinson at 947 feet; Car-De-Zone Oil Co.'s No. 4 Stubblefield at 630 feet; Dorothy Oil Co.'s No. 2 Davenport, cleaning out after a shot at 3,380 feet; Kimmell and others' No. 1 Lamb, drilling at 2,930 feet; Lindsey and others' No. 2 Dulin, spudding; Pennant Oil & Gas Co.'s No. 8 Teston, drilling at 572 feet; States Oil Corp.'s No. 6 Calvert, spudding a new hole; No. 1 Hise, spudding; Texas Development Co.'s No. 1 Eppler, spudding.

Wildcats Drilling

Callahan County: Byron Union Oil Co.'s No. 1 Hennessey, drilling at 4,540 feet; Prewitt and others' No. 1 W. W. Crane, setting casing at 1,930 feet; No. 1 Lineecum, drilling at 1,459 feet.

Mitchell County: Eastland Oil Co.'s No. 1 Clark, drilling at 700 feet; No. 2 Keynard, preparing to swab; Sloan and others' No. 3 Miller, cleaning out at 3,025 feet; California Co.'s No. 12 Morrison, cleaning out at 3,025 feet; No. 1 Elder, drilling at 200 feet; No. 8 Abrams, at 2,500 feet; Thompson and others No. 1 Adams at 300 feet.

Sterling County: Co-Operative Lease & Development Co.'s No. 1 Douthitt, cleaning out at 2,000 feet; Chicago-Texas Oil & Gas Co.'s No. 1 Durham, setting casing at 1,810 feet; Ford and others' No. 1 Foster, drilling at 1,780 feet.

Coke County: Weidler Oil Co.'s No. 1 Mims, drilling at 1,900 feet.

Comanche County: Mon-Tex Oil Corp.'s No. 1 Goss, drilling at 1,635 feet; Trojan Oil Co.'s No. 1 Utterback at 1,050 feet.

Iron County: Gladys Belle Oil Corp.'s No. 1 Suggs, drilling at 1,700 feet; Va-Tex Petroleum Co.'s No. 1 Noelke at 2,120 feet.

Parker County: English and others' No. 1 Peters, underreaming; Weaver and others' No. 1 Evans, underreaming.

Cottle County: Woodley and others' No. 1 Dulaney, drilling at 2,900 feet.

Baylor County: Apple-Brandeberry Oil Co.'s No. 1 Street, drilling at 1,214 feet; Bussell and others' No. 1 Bussell, drilling at 1,515 feet; Dyer and others' No. 1 Cox at 300 feet; Duke and others' No. 1 Dippery at 1,730 feet; Jones and others' No. 1 Stephens at 300 feet; McCaldin and others' No. 1 Martin at 1,210 feet.

Clay County: Bennett and others' No. 1 Holloway, drilling at 810 feet; Southern Exploration Oil Co.'s No. 1 Dunn, at 1,913 feet; Atlantic City Production Co.'s No. 1 Scaling, fishing at 3,112 feet; Culbertson and others' No. 1 fee, drilling at 300 feet; Halmack Oil Co.'s No. 1 Gore, drilling in hard rock at 1,671 feet; Lone Star Gas Co.'s No. 1 Magnolia Petroleum Co. is on sand at 1,600 feet; No. 22 Martin, cementing casing at 1,678 feet.

Montague County: Boyd Oil Co.'s No. 1 Salmon, rigging up to pump at 902 feet; Daniels and others' No. 1 Howard, fishing at 1,273 feet; Humphreys Boyd Oil Co.'s No. 1 Jones, showing oil at 878 feet; No. 3 Maddox, drilling at 2,145 feet; Owenwood Oil Corp.'s No. 1 Salmon at 1,125 feet; The Texas Co.'s No. 3-A Gist at 1,947 feet; Texhoma Oil & Refining Co.'s No. 1 Lemon, underreaming; No. 3 Howard, drilling at 910 feet.

Cooke County: Pettit and others' No. 1 Nelson, drilling at 2,385 feet; Rawson and others' No. 1 Aldridge at 2,410 feet.

Grayson County: Clopton and others' No. 1 Thorne, underreaming.

Fannin County: Lester Petroleum Co.'s No. 1 Graves, drillig at 2,790 feet.

Denton County: Galloday Oil Co.'s No. 1 Dollenger, drilling at 880 feet.

Scurry County: Northwest Oil Co.'s No. 2 Moore, drilling at 780 feet.

Shackelford County: Haile and others' No. 1 Reynolds, drilling at 2,400 feet; Loggie and others' No. 1 Black Brothers' at 520 feet; Phillips Petroleum Co.'s No. 1 Landreth at 3,190 feet.

Palo Pinto County: Owens and others' No. 1 Bond, drilling at 3,700 feet; Scott and others' No. 3 Wheeler at 3,200 feet; Singleton and others' No. 1 Smith at 1,506 feet; Hart and others' No. 1 Caldwell at 1,000 feet; Little Caddo Syndicate's No. 2 Massie at 1,325 feet; Manning and others' No. 1 Hitson at 3,978 feet.

Pecos County: Arkansas Fuel Oil Co.'s No. 1 Blackstone, drilling at 2,050 feet; Plymouth Oil Co.'s No. 1 Perry, showing sulphur water at 2,270 feet.

Crockett County: Alidor Oil Co.'s No. 1 University, drilling at 2,600 feet; Kanawha Angelo Oil Co.'s No. 1 University, underreaming; World Oil Co.'s No. 1 Powell, fishing at 2,400 feet.

Hutchinson County: Barnum and others' No. 1 Johnson, underreaming; Dixion Creek Oil Co.'s No. 1 Smith, fighting gas at 2,940 feet; New Domain Oil Co.'s No. 1 Barton, fishing at 2,690 feet; Amarillo Oil Co.'s No. 2-B Bivens, fishing at 2,727 feet; Prairie Oil & Gas Co.'s No. 1 Shaw, drilling a broken lime at 3,278 feet; Twin Six Oil Co.'s No. 1 Kingsland at 2,988 feet; Wilson and others' No. 1 Whittenburg, fishing at 2,905 feet.

Moore County: Amarillo Oil Co.'s No. 1-A Masterson, drilling at 2,125 feet.

Potter County: Amarillo Oil Co.'s No. 1 Warrick, setting casing at 2,883 feet; No. 1 Bush, fighting gas at 3,495 feet; No. 3-A, drilling at 2,530 feet.

Carson County: American Refining Co.'s No. 4 Burnett, spudding; Crosbie Oil Co.'s No. 2 Burnett, drilling at 1,000 feet; Olson Brothers' No. 1 Burnett, in shale and lime at 2,840 feet; The Texas Co.'s No. 5 Burnett, resetting casing at 2,810 feet; No. 2-A M. C. Burnett, fishing at 2,865 feet.

Gray County: Anderson and others' No. 1 Bradford, drilling at 1,960 feet; Danciger Oil & Refining Co.'s No. 1 Bowers at 1,310 feet; Wilcox and others' No. 1 Wilson, drilling in lime at 3,780 feet.

Wheeler County: Whittington and others' No. 3 Williams & Laycock, drilling at 870 feet; No. 4 Williams & Laycock at 1,050 feet; Vaughan and others' No. 1 Krey, spudding.

TEAPOT DOME ARGUMENTS

CHEYENNE, Wyo., March 24.—After a brief presentation of the case for the defendants arguments were begun and continued in the Goverment's suit for the cancellation of the Teapot Dome Naval reserve oil lease. The issue appears to have narrowed down to the legal authority of the Government officers to make the lease. Admiral Robison was a chief witness for the defense, maintaining the lease was for the interest of the Navy and the National Defense.

MR. TEAGLE POSTPONES TRIP

At the last moment pressure of business obliged President W. C. Teagle of the Standard Oil Co. of New Jersey to postpone his trip to Europe. It was announced that he had sailed Saturday.

CRUDE OIL FOR SALE

Two hundred thousand barrels of Wortham Crude Oil to be delivered at once at a fixed price. Also one million barrels of Wortham and Powell Crude Oil to be sold at a fixed price to be delivered at the rate of about three thousand barrels per day over a period of twelve months. For further information see or communicate with J. K. Hughes, Mexia, Texas.

No brokerage fee allowed

The Cross Cracking Process

The truth about cracking residual fuel oil is that this can best be accomplished by first taking from it the stock that is worth cracking and mixing the heavy, yield-reducing, coke-forming portion with the fuel oil from the cracking operation, where it belongs.

THE M. W. KELLOGG CO.
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Branch Offices:
700 Baltimore Ave., Kansas City, Mo.
19th & Harrison St., San Francisco, Cal.
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WRIGHT IMPROVED *HIGH SPEED* HOIST

Here is a stronger hoist, a speedier hoist, an easier running hoist, a hoist with a much longer life, and a hoist with a greater factor of safety.

In fact, the **Wright Improved High Speed Hoist** can best meet all oil field requirements, for the simple reason that it possesses improvements found on no other hoists.

Look over just a few of them and you will readily see why the Wright is superior.

BALL BEARING STEEL DRIVING PINION

SPECIALLY DESIGNED CHAIN

SUPPLEMENTARY STEEL SAFETY ARMS

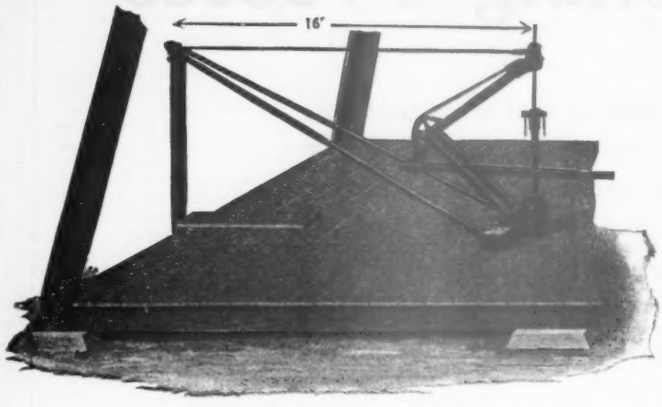
SPECIAL OILING SYSTEM

Ask for literature on our many styles and strengths.

BALL BEARING SWIVEL HOOK

16-D

LIGHTNING
OIL FIELD SUPPLIES
PUMPING POWERS, JACKS, STUFFING BOXES, ETC.



LIGHTNING JACKS

The Jack that takes the place of the Beam Pump

ADVANTAGES:

Simplicity — Lateral Adjustment
Wide Range of Adjustment — Simple to Install
Special Oiling Features — More Oil Pumped

Longest stroke without use of Multiplier

Oil Field Supply Department

KANSAS CITY HAY PRESS CO., Kansas City Mo.

The Quality Leaders

Since their introduction STEELEX and BRONZEX Balls and Seats have been quality leaders. STEELEX is used where floating sand is present—BRONZEX where alkali or lodestone cause trouble. Your dealer stocks them.

THE CHARLES N. HOUGH MFG. CO.
Franklin, Penna.
"Products that cut down your underground overhead"

LOWER SAND PROFITS COUNT HALF ON INCOME TAX, ENGINEER SAYS

EL DORADO, Ark., March 21.—Good things never come singly. Still another one for operators in the deep sand area was pointed out recently by Harlan Bennett, valuation engineer, who declared that most of the operators will have to pay income tax on only half their profits from lower sand operations. Mr. Bennett added that operators should take steps now to utilize the benefits which the law affords them.

"For income tax purposes," said Mr. Bennett, "this deep sand is the same as another new field in no way related to the production from the upper sand. By virtue of the prior ownership clauses, nearly all of the operators will have the privilege of discovery revaluation, when they go to make their income tax returns next year. The effect of this privilege, when availed of, is to exempt income tax, half the net income from the property. Because of the progressive surtax rates, this exemption really means a saving of considerably more than half the actual tax bill.

"In the development of the first sand, nearly all of the royalty owners but not many of the lessees had the discovery privilege. Because of the low price of oil, it was not always of value to those operators that had it, but this year the prospects are that much profit will be made and the privilege will be of very real significance.

"If the privilege is utilized, however, it will be necessary for the operator in his tax return for next year and in his depletion report to show separately the amount of oil produced from each sand. This must be done, if not with certainty, at least with reasonable accuracy. I am advising clients that the simplest and safest way is to handle the oil from the two sands separately at all times and to keep separate records of it. It will be very difficult at the end of the year for an engineer to attempt to separate the production by estimating, and then convince the treasury department the estimate is right.

"What I have said is based on the law as it is at present. We are certain to have a new tax law to cover this year's income and it is possible the discovery privilege will be restored to its conditions under the 1924 law. That law gave the discoverer exemption up to the full amount of his income. Certain Senators, however, in framing the 1924 law threatened to do away altogether with the discovery privilege and the best compromise the oil industry could get after a hard fight was half the old privilege. Secretary Mellen is understood to favor the full exemption and it is entirely possible this will be restored—which just doubles the significance of what I have said. At any rate there is no prospect of a further reduction so that attention to this matter by deep sand operators now while there is time will mean much to them."

Oil Securities Sold By Education Board But Many Still Held

NEW YORK, March 20. — Several large blocks of Standard Oil securities held by the General Education Board, which was endowed by John D. Rockefeller, Sr. several years ago, were sold by the board during the fiscal year to June 30, 1924, according to its annual report. The largest block disposed of was that of the Vacuum Oil Co., which aggregated 34,508 shares. In addition 4,570 shares of Atlantic Refining Co. stock were sold in the year covered by the report and 25 shares of Washington Oil. The board also reduced its holdings in some of the Standard Oil companies. The holdings of 4,175 shares of National Transit were reduced to 2,975 shares, the holdings of Standard of Indiana were reduced from 43,320 to 31,020 shares and Standard Oil of New York was reduced from 91,440 to 79,140 shares.

The majority of the security holdings, however, remained intact. The block of 52,569 shares of South Penn Oil stock held by the board was valued at $181.48 a share. This was equal to 26.28 per cent of the total capital stock of this company outstanding and was the highest priced stock carried in the list of holdings. From a money standpoint, the 737,680 shares of Standard Oil of New Jersey, valued at $22,494,838, made up the largest individual block. South Penn Oil ranked second from a money standpoint and Ohio Oil third. The 163,460 shares of the latter stock was valued at $9,454,238.

The board's list of Standard Oil stocks, held, together with the price per share and the aggregate value of such holdings, follows:

Company—	No. Shares	Price a Share	Ledger Value
Anglo-Amer. Oil.	386,518	$19.32	$7,467,528
Atlantic Ref. pfd.	5,252	107.398	564,058
Buckeye P. L....	190	77.321	14,691
Illinois P. L.....	13,651	139.768	1,908,069
Nat. Transit	2,975	16 481	49,032
Ohio Oil Co.	163,460	57.838	9,454,238
Prairie O. & G...	42,099	135.312	5,696,512
Prairie P. L....	64,800	57.058	3,697,413
South Penn Oil..	52,569	181.485	9,540,510
S. O. of Ind.....	31,020	10.853	336,667
S. O. of N. J. pfd.	65,411	102.825	6,725,800
S. O., N. J. com.	737,680	30.494	22,494,838
S. O. of N. Y....	79,140	6.575	520,347
Total 1,644,786			$68,569,703

Since the General Education Board was endowed by Mr. Rockefeller, the majority of its security holdings are stocks of Standard Oil companies. Numerous other securities are held by the board, however, including bonds and stocks of both railroad and other industrial corporations. All of the stocks owned by the board, including Standard Oil securities, were valued at $81,767,441 as of June 30, 1924, against $84,946,773 as of the same date in 1923. Holdings of bonds amounted to $38,581,764, which together with other items gave the board securities valued in the aggregate at $120,649,205 on June 30, 1924. Bonds held on June 30, 1923, amounted to $41,747,819, making a total of $126,694,592 for all securities as of that date.

The value at which the securities are carried by the board by no means represent their real worth. It was pointed out that the 79,140 shares of the capital stock of the Standard Oil Co. of New York, carried on the books at $6,575 a share, are selling in the open market around $46 a share.

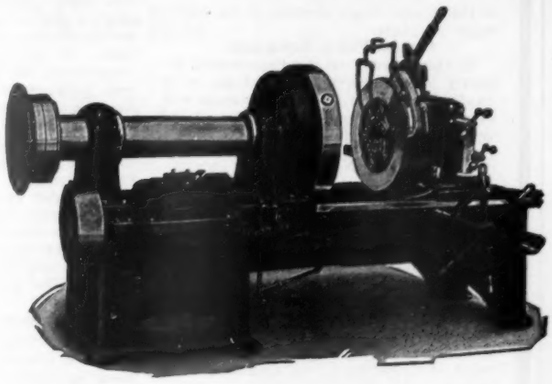
The last big contribution made by Mr. Rockefeller Sr. to the board was in 1919, when he donated securities valued at approximately $50,000,000.

GASOLINE TAX REFUNDED

AUSTIN, Tex., March 20.—The House of Representatives has adopted a resolution authorizing Lon A. Smith, former comptroller, to return to payers approximately $300,000 collected under the original gasoline sales tax law, and held by him pending outcome of litigation involving the validity of the original law. It is claimed these sums were duplicate payments on the same gasoline other tax was paid on because of the obscurity, indefi- paid on because of the obscurity, indefi- The law was changed two months after its passage, and put in its present form.

NEW STATIONS AT QUINCY, ILL.

C. H. Armould, head of the Armould Oil Co., of Hamilton, Ill., with many service stations, announces he will move his headquarters to Quincy, Ill., where he has erected new stations with quarters for the office of the company. A. L. McArthur, advertising manager, who was owner of the Hamilton Press, has sold his paper to devote his entire time to the advertising for the oil company.



Always Up-to-Date

The individual motor drive is desirable for all machine tools. Bignall & Keeler pipe threading machines are well adapted for constant speed motors, as all speed changes are obtained through steel gears running in oil. The compact gear-box is a part of the bed of the machine.

Send us your inquiries

BIGNALL & KEELER MACHINE WORKS
of the N. O. Nelson Mfg. Co.
EDWARDSVILLE, ILLINOIS

BIT AND JAR-STEEL

BOX-PIN-STEEL-SLIP-STEEL

UNDER-REAMER-BODY and CUTTER STEEL, DRILL COLLAR STEEL

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CAPPING and SOCKET STEEL TOOL-JOINT STEEL

SPECIAL-HIGH-GRADE

SPECIAL ALLOY STEEL

FORGING-BILLETS

QUALITY and SERVICE

Manufactured By

ANDREWS STEEL CO.

NEWPORT, KY.

"Spinners of Fine Cordage Since 1869"

H&A Cordage

PURE MANILA BULL ROPE

The Standard for oil fields.
Best wearing, long fibre manila. Absolutely free from low grade fibres.
Light weight—no excessive oil content.
Great serviceability and long life.

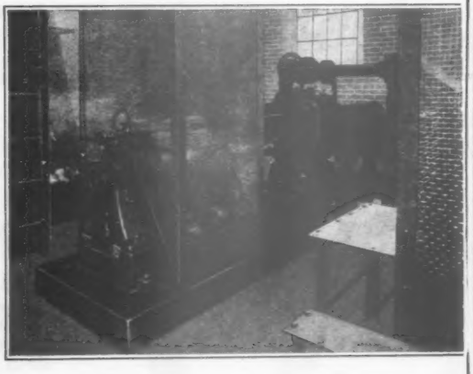
Ask the Driller

LONGHART SUPPLY COMPANY
FORT WORTH

HAZARD WIRE LINES, FARRAR & TREFTS BOILERS
H. & A. BULL ROPES AND GOODYEAR BELTING

Kinney

Depend upon it it's a Kinney Pump



Steady Continuous Service

—hour after hour, day after day,—requiring little or no attention, giving a steady consistent flow of the heaviest crudes, asphalt, tar and all viscous and bituminous products. When you find this condition, it is more than an even chance that it is a KINNEY PUMP.

Thousands of KINNEY PUMPS are telling the same story of consistent efficiency in refineries that dot the map of the United States and foreign fields. Low cost operation, low cost maintenance, trouble-proof service under all conditions,—these are the reasons why so many plants are depending upon KINNEY PUMPS—and why it would be profitable for you to investigate this pump in both its types—steam jacketed and plain.

Let Us Send You Data

KINNEY MANUFACTURING COMPANY
Boston, Mass.

Philadelphia Chicago
New York Kansas City Houston
San Francisco Los Angeles

ELEMENTS IN NATURAL GAS EQUIPMENT

(Continued from Page 165)

is the largest single element of the equipment of plant.

Central Power Equipment.

Having determined the displacement capacity in millions cubic feet of gas to be handled daily, the following formula will express in terms of unit requirement the equipment to be installed:

$$N=\frac{1.17V}{D}$$

In which N=Number of units to be installed

V=Net gas volume to be handled daily, cubic feet.

D=Displacement (daily) capacity of unit of compressor selected. It may seem elemental to set the matter up in this fashion, but it is desired to emphasize the excess capacity factor which should be provided in terms of computed displacement of cylinders whose dimensions are known.

Double acting cylinders, i.e., those which compress and discharge on both piston strokes, forward and return, displace volume space of

$$2S=\frac{3.1416R^2xL}{1728}$$

cubic feet per minute, wherein R=radius of cylinder bore, L=length in inches and S=speed in revolutions per minute of the compressor crank, and since this is per minute the volume, V, cubic feet per 24 hours will be the above quantity X1440.

And the horsepower requirement per unit machine will be found from the simple formula given in the outset, with due allowance being made for loss of power between engine power cylinder and compressor cylinder, about 10 per cent in the case of direct connected machines and about 12½ per cent in the case of belted drive.

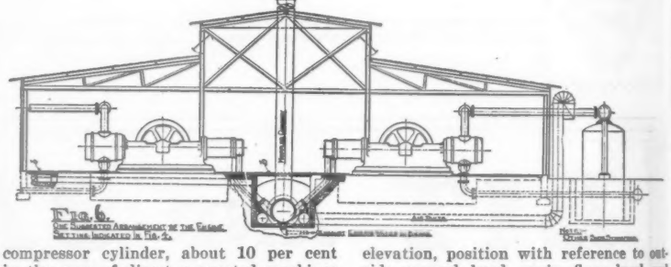


Fig. 6.

Setting of Engines

Any good mechanic knows enough to attend properly to the setting of engines, but he should have the guidance of an engineer in the selection of his materials of foundation, the depths to which he shall excavate, the position in elevation of his machinery with reference to floor line, etc. Since excavation and movement of earth is a considerable factor of cost, and since such excavations for machine foundations must be refilled with more expensive concrete, it is plain horse sense to cut away only that amount of earth material required to give a proper setting for the engines and compressors or other machines installed. Usually, heavy gas engines are none too well balanced. They require, therefore, a sufficient mass of foundation material to secure rigid anchorage without vibration of the machine. Manufacturer's specifications for foundations will provide usually the required mass of foundation in conventional dimensions which the manufacturer uses in his standard erection blue prints. With these prints for guidance, the erector will often know no better than to blast the hole out of solid rock to blue print dimension and then refill the hole with concrete, whereas he might, and should only remove surface earth and sufficient rock to accomodate floor grade, and, if necessary, cut into rock for his anchor bolts. The anchor bolts, in such case, may be shortened to one-half of their specified length, ragging the bottom end or turning T sections thereon and a better job will be made than with the use of a poor concrete fill in larger excavated openings. When hard clay or shale is encountered near the surface an excavation of somewhat greater area than called for in manufacturers' blue prints may be made and at the same time reduce depth to a degree which will effect a savings of 10 to 25 per cent of the foundation mass with the best of results. It will thus be seen that no fixed proportions can be given to fit the general requirement. But an approximation might be suggested of about 1 cubic yard of foundation (good concrete) to toch 1,500 pounds of machine weight for the case of belted compressors and direct driven twin type engine-compressors, and a higher concrete ratio, say 1 cubic yard to each 1,200 pounds of machine weight for belted engines and single engine compressor units would be about a minimum requirement when good clay or shale is the footing found for the machines.

Features of Arrangement

The importance of plan and elevation layout in assembly and erection of engine room equipment cannot be overestimated. Usually the company investing the money is anxious to hasten with all possible speed the work, once started, to completion or at least to the stage of production. There is no hindrance whatever involved in making up drawing to cover the requirement, since an engineer with a capable draftsman at hand can break his ground for the work and start a layout at the same time, and the layout work can be kept ahead of the construction far enough that many a costly error will be avoided.

Major features of arrangement are; in plan, space positions of machines with reference to building walls and door openings and with reference to duplicate units and auxiliary machinery where same is placed within the main engine room; in elevation, position with reference to outside ground level, main floor level and the levels available or necessary for exhaust, drainage and main piping connections. As to the former, distance from wells must be kept such that pistons may be withdrawn from the machines and where this might be less than 6 feet, this distance is a well chosen minimum in any event. Where duplex machines carry their flywheels within the foundation lines a minimum distance of about 6 feet may be used between super-posed metals above foundation for the best appearance and utility. When overhung flywheels are to be used, this minimum is hardly sufficient because about 30 inches of the space has to be utilised to meet safety rail requirements and less than about 4 feet is cramping passage space and the distance between machines should be kept at or above 6 feet, 6 inches.

Floor space arrangement has, to date, been of the character developing long rows of machines in one center line. This practice can be revised advantageously where the number of machines of the direct type exceed about eight and of the belted type about 10. A building nearly square, of quadrangular type, with either saw tooth or monitored roofing can be used and the machinery placed in two lines, the building floor space materially reduced and a more satisfactory arrangement of connections can be developed. A plan diagram is submitted of the two arrangements in support of the assertion.

Liberal Floor Space

Assume the setting of 24 machines with liberal floor space, the one setting in a straight row, the other in two rows of the machines: it will be seen that the requirements in the first case will be for

Donovan's Boiler Works

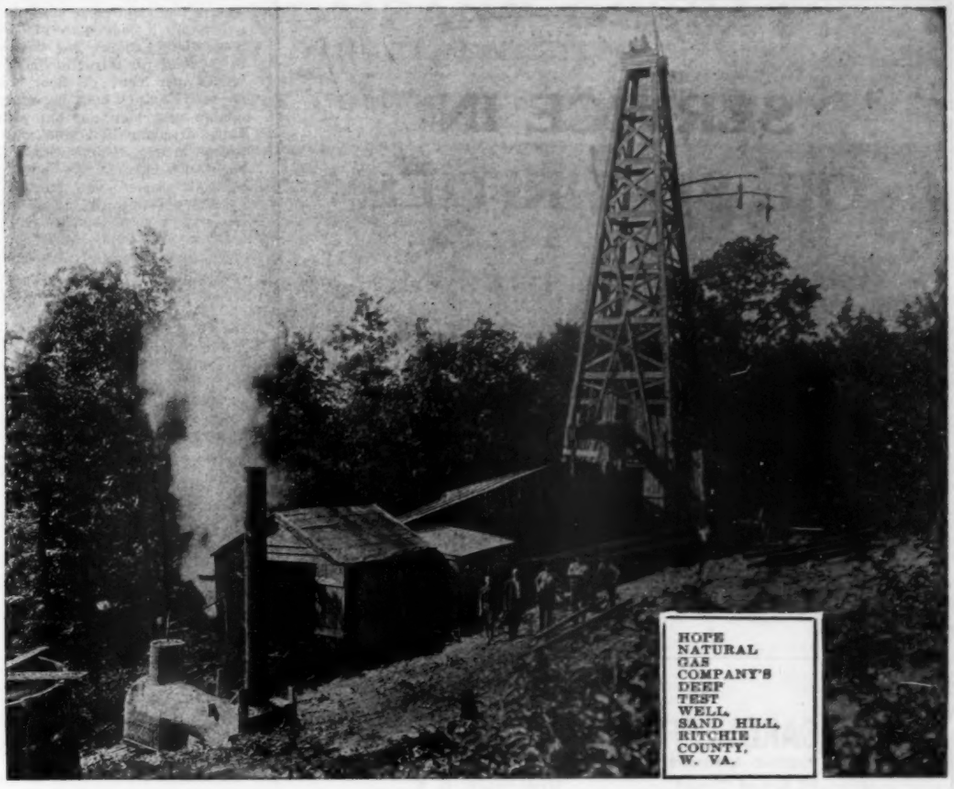
INC.

Parkersburg, W. Va.

Accompanying is a photograph of the Hope Natural Gas Company's deep test, Sand Hill, Ritchie County, W. Va. This well at the time this picture was taken was drilling at 4,300 feet and in the 8" hole. Expect to set 6¼" casing at 4,600 feet. This rig is probably the most expensive rig ever used in West Virginia, being very heavily built, corners being doubled all around, all braces and girts also doubled and an 8"x8" timber securely bolted in each corner of the rig from bottom to top.

The rig irons are unusually heavy and of special pattern; band wheel shaft being 7½" in diameter, with forged steel crank. They are running a one-inch wire line, five-inch stem 34 feet long, eight-inch bit six feet long and with jars and rope socket making the drilling stem, bit, etc., 49 feet long. They are using 14x14 Ajax engine and one of DONOVAN'S 25 H. P. boilers equipped with low pressure burner and are only using one pound gas pressure. Mr. Donovan considers this a very remarkable performance for a 25 H. P. boiler to do this work, and when this photograph was made the tools were pulled from the hole, bailer run twice, the tools again lowered into the hole and was drilling in exactly fifty minutes. This boiler has been in service for something over five years and has just finished a well for the same Company in the same district 4,600 feet deep. The only repairs ever made on this boiler was to put in a new gas flue.

The cut shows from right to left: Mr. Powell, Superintendent Hope Natural Gas Co.; James Griffin driller; Claude Tetrick, tool-dresser; Hugh Donovan, Jr., builder of the boiler, and Robert Donovan, his son.



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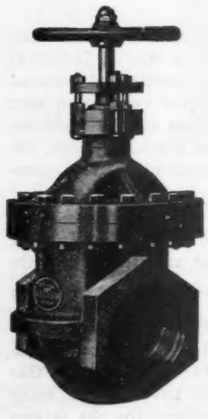

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a floor space 40 feet by 452 feet=18,080 square feet, while the same in the second will be for a floor space of 68 feet by 236 feet=15,048 square feet with a difference in favor of the latter of 3,032 square feet or 12 per cent of floor and building space. Engines may be arranged in the double row plan so that either the exhaust or compressor ends may be thrown to the center aisle of the building. The plan with exhaust ends so arranged may be made most ideal, but the saving to be affected is probably about the same for either arrangement of the machine setting, and will amount to something near 50 per cent of either exhaust pipe and muffling element, or, of gas intake and discharge pipe and manifolding.

The ideal arrangement suggested, i.e., that of center aisle exhaust delivery can be worked out not only to the saving of 50 per cent of the necessary exhaust pipe and muffler provision, but the exhaust heat can be utilized during cold weather to do 80 per cent of the required heating, at a saving of sufficient steam pipe and radiator equipment to offset the cost of such heating provision.

Naturally a little forethought and planning are required to work the arrangement out but it is neither complicated nor expensive and will be most effective for the purpose proposed.

Tunnel and chimney structures of monolithic, reinforced concrete type have come into almost universal usage. They are quite effective as mufflers, and may be so constructed as to reduce back pressure on engine exhaust to a negligible minimum. They have a pleasing appearance, and are not more expensive to build than individual mufflers of either concrete or metal.

Exhaust Pipes

Exhaust pipes should, by all means, be of cast iron, having recessed male and female joint ends, and when so constructed may be kept free from leakage and the other objectionable features, such as excessively rapid depreciation, of steel pipe and standard fittings. So important to success are these details of construction that to overlook them in the design and layout of plant is oftentimes to leave to operation a heritage of unending repairs and replacements. In no detail is this more likely than in gas engine exhausts.

Two sectional elevations are submitted, figures 5 and 6. A comparison of the two arrangements is interesting. We may carry the comparisons as far as we like, through costs, utility and convenience of operation, probable maintenance and upkeep, and finally, appearance and that favorable impression which can be produced for the visitor or the attendant. Figure 5 corresponds to the plan layout indicated in figure 3, while figure 6 corresponds to that of figure 4. It is suggested that the arrangement in dual rows of machines will be found cheaper than the single string setting for a minimum of about 10 machines. Let us admit that there may be chance for error of the suggestion. Discuss, then, the utility factor, the use of first class materials and construction being presumed.

Gas engines respond in such prompt and pronounced fashion to derangements of fuel, water, electric current for ignition, load condition, etc., that a large element of success in their operation lies in constant vigilance on the part of the engine tenders. Naturally the engineer and oilers on a large engine room floor become, if they are worthy of their places, so attuned to the rythm of their machines that any derangement of an engine near them is immediately sensed. But, no matter how skilled these men may become, they cannot be expected to get this sensing of trouble in a machine 75 or 100 feet distant when there are four of five of the same intervening. A man's vision cannot guide him further than to observe his flywheels and valve action in the case of four-stroke type engines (and there are no visible valve gears in two-stroke engines.)

Types of Building

In the single string setting, two oilers may be kept busy on their beats of oiling and inspection, and, if they are careful and attentive, they will be, at all normal times, in touch with about eight machines, four for each man, so closely as to be cognizant of their running condition. In the double string setting this number will be augmented to at least 12 and likely 16. Light and open, unobstructed space in any work shop are large factors of well being and alertness of work people employed there. The value of these factors is usually under estimated. A comparison check will show material difference in terms of productive efficiency. The type of building suited to the dual line setting will be either saw-tooth or monitor. For appearance sake the selection will be, in most cases monitor type. nd while this will call for a layout, in order that machine and center column spacing may not conflict, either type of building lends ideal condition for lighting and ventilation, and the monitor type provides ready means for support of light traveling blocks at least for lifting the heads, pistons and cylinders at the power ends of engines. For the two row setting, the arrangement indicated of a common exhaust muffler is sufficiently clear to require but little explanation. Very short exhaust connections can be made. This reduces to a minimum the annoying and troublesome result of severe expansion in the exhaust connections.

Design and arrangement of the type indicated may be as indicated, or the muffler chamber may be constructed of concrete only. In the latter case, due precaution must be had for sufficient strength of the tunnel arch to preclude any possibility of disruption. The pressures developed in cases where mufflers are blown up are not of common knowledge to the writer's information at least, but they do not exceed such reasonable limit as will permit of safety when as much as 18 inches of well reinforced arch section is provided as top to tunnel construction, with explosion hatches opening outside the building at its ends.

The arrangement as indicated permits of location of the air ducts for combustion, the cooling water inlet and outlet mains and of air circulation for heating and ventilating main building in winter in the arched tunnel when steel or cast iron muffler chambers are used. If such form of construction is used, the ducts for air of combustion may be made of up of thin sheet metal, although this should be welded. The hatches for entrance to the housing tunnel should be provided with interchangeable covers, of grid type for winter use and solid for summer. The ducts, (b) fitted with outlet covers of the same construction will serve the heating requirement ideally and the scheme involves admission of cold air at the tunnel ends.

Expansion Joints

Expansion joints should be provided at intervals of not more than 50 feet of muffler length. Annular rings on steel plate dished sufficiently to accommodate the expansion of the muffler sections will serve this requirement.

It has been found in practice that the cross-sectional area required for common mufflers serving a number of engines is not nearly so great as for single engines. For engines having the average piston speed, not exceeding about 600 feet per minute, muffler area may be made about

$$R = \sqrt{\frac{.33A}{3.1416}}$$

in which R is the radius of the muffler chamber and A is the sum of areas of all the gas engine cylinders which the muffler is to serve. The same formula, changing the numerator of the factor under the radical to .25A for two cycle and .20A for four-cycle engines, will do also for the chimney design. One important detail of construction for either type must not be overlooked. This is water drainage for the water of combustion and cooling of the exhaust pipes. Where concrete is used, considerable amounts of debris will accumulate at the low point of water outlet. It must be prevented from entering the sewage line unless this can be given as much as 10 per cent drop, or made very short so that it can be kept open with a rod. Good practice will suggest a manhole and plug providing easy access for clean-out of the

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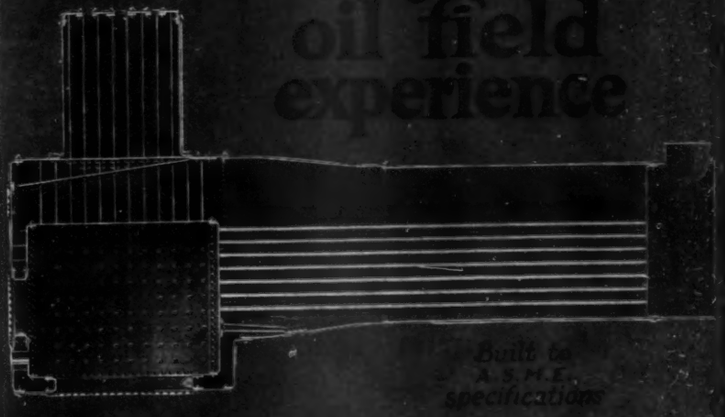

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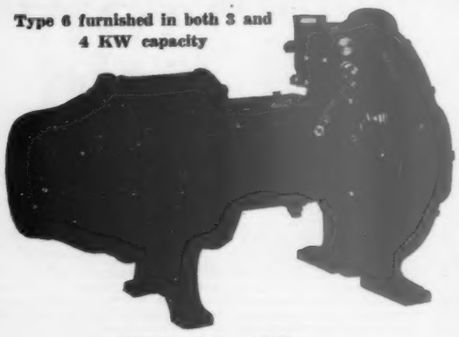

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muffler located just back of the water outlet and on the up-stream side of a baffle plate provided with screen of mesh small enough to prevent pebbles or broken down material of concrete from entering the sewer duct.

The same scheme of arrangement will permit of the setting of belted or direct drive equipment, short belt centers with idlers or tighteners and endless leather belting being ideal. Changing the arrangement to locate the compressor cylinders in the center of building permits of short manifold connection of intake and discharge gas, and this arrangement will appeal as a better one to some minds.

DRILLERS ARE ACTIVE AROUND WARREN, PA.

WARREN, Pa., March 21.—Drilling operations in and around Warren are keeping the drillers busy. Some steady producers have been located. At present most activity is centered around Clarendon and Stoneham.

Harry MaGee is drilling a well on the Milton Beaty lease on the east side; he finished two wells and is on another with the possibility of being kept busy all summer. On Ott run, Grosch Brothers are sinking a well for Fred Trax.

Ruhlman & Grosch are on the second well on the McCray lease at Sulphur Springs, which they have purchased and it was stated drilling operations had caused the famous spring to dry up, but it is thought that it will start flowing again as soon as the casing is placed and the drilling ceases.

Some good wells are being drilled in Clarendon on the Kay Oil & Gas property. This lease has provided some extra large producers and nearly every well has proven to be a producer to some extent. Smith & Johnson have a string of tools at work on this lease and Namon Champion is also running a tour, the two crews having keen competition. S. E. Kapp is also drilling in this district on his own lease.

Charles McCool and brother will soon be finished with their contract on Dutchman run near Stoneham on a well which shows indications of being a producer. J. M. Sharp is operating near Clarendon.

A number of local drillers, including William Lessler and Jim Eberhart, are going to move their rigs from the present locations to new territory and it is understood Dave Culbertson is planning sinking a couple of wells on his lease across the creek on Conewango Avenue.

William Myers & Son are busy on the Lauffenberger farm on the Cobham Hill road which is under lease to John Driscoll.

PENN MEX FUEL WELL MAKING 10,000 BBLS.

PITTSBURGH, March 21.—The home offices of the Penn Mex Fuel Co. has received word from Tampico, Mexico, that No. 16 on the big Paciencia tract completed at a total depth of 1,725 feet, is still flowing at the rate of 10,000 bbls. a day. This well is an offset to the Mexican Petroleum Co.'s No. 5 Chapacas and 1¼ miles north of No. 13 on the Paciencia lease, which is now producing 14,000 bbls. a day. The Paciencia lease is operated jointly by the Penn Mex Fuel Co. and the Transcontinental Petroleum Co. (Standard Oil Co. of New Jersey).

The 10-inch pipe line from its production on the Paciencia tract has been completed and running 10,000 bbls. a day. The two companies are starting three wells on the Paciencia lease, located in the vicinity of No. 16.

OIL GRANT IN IRAK

A report from Bagdad says the Turkish Petroleum Co. has signed a convention with the Irak Government for the exploitation of petroleum deposits, leasing the vilayet of Basra for 75 years. The four groups of the Turkish Petroleum Co. will share equally, the Anglo-Persian, the Royal Dutch-Shell, seven of the chief American companies, including the Standard Oil Co., and 65 French companies.

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The company will confine its wells to 24 areas, each of 8 square miles and will invite tenders for leases for the remainder. If enough oil is found pipe lines across the desert to the Mediterranean will be laid. The chairman of the company is to be British.

RECORD FOR CASING IN CALIFORNIA WELL

LOS ANGELES, Cal., March 21—Setting new Kern County records for oil field development the San Jose-Elk Hills Oil Co. has set 4,990 feet of 8¼-inch casing in its No. 1 well, said to be the longest string of that size casing ever set in this district. Another accomplishment was the drilling of 4,990 feet of open hole in this well before setting casing. Some 1,015 sacks of cement were used. The property is on Section 26-31-24.

The magnitude of the job is not appreciated by those not connected with the actual drilling of oil wells, until it is realized that 4,990 feet of casing weighs over 90 tons and that during the period in which the casing is being coupled and lowered into the hole and while 1,015 sacks of cement are being circulated into the hole, the string of pipe must be kept working up and down in the hole to avoid freezing and when the last of the cement is run into the hole the casing is landed on the bottom of the hole.

Setting a new record 4,946 feet of 8¼-inch, 36-pound seamless casing was recently set in the Kettleman Hills well, of the Marland Oil Co., in 30 hours. The hole is being drilled by L. T. Edwards, working under the supervision of Charles P. Prewett, superintendent for the Marland interests in the Coalinga Field.

ALASKAN OIL SEARCH IS BEING RESUMED

The exploration of Naval Petroleum Reserve No. 4 in northern Alaska on behalf of the Navy Department will be continued by a party from the Geological Survey. This party in charge of Gerald FitzGerald, topographer, with Walter R. Smith, geologist, has sailed from Seattle.

The party expects to explore the unknown region between the head of Pitmegea and Utukok Rivers during the summer, descending the Utukok until they connect their surveys with those made in 1924 by W. T. Foran, geologist, and O. Lee Wix, topographer. If time permits they will then work eastward and, if possible, find a pass into the upper part of Meade River Basin and connect with the surveys made last year by Philip S. Smith and R. K. Lynt, at the head of the Ikpikpuk and the western fork of the Colville. This work will probably run into the fall.

This will be Topographer FitzGerald's third year in topographic exploration of the Naval Petroleum Reserve. Geologist Smith has made a special study of the rocks most likely to furnish petroleum in this region. During the last four years he has made investigations for the Geological Survey in the oil fields of the Alaskan Peninsula.

NOCONA GAS COMPANY

NOCONA, Tex., March 21.—The Nocona Gas Co., recently incorporated, has a capital stock of $150,000 fully paid. The incorporators are Harry F. Mitchell of Fort Worth, president; P F. Lesh, Wichita Falls, secretary; L. H. Lehman, Fort Worth, vice president. Since the corporation has been formed the work of installing a gas system for Nocona will progress rapidly. It is expected gas will be on hand for consumers by about July 1.

INSTALLING GRAY PROCESS

Installation of the Gray process is under way at the plant of the Lubrite Refining Co. in East St. Louis, Ill. The plant will have a polymerizer with a capacity of three tons of Fuller's earth.

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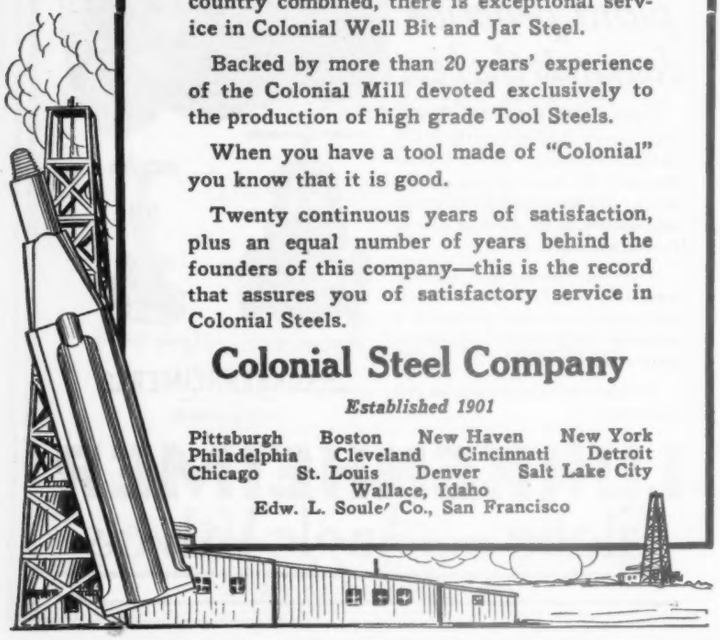

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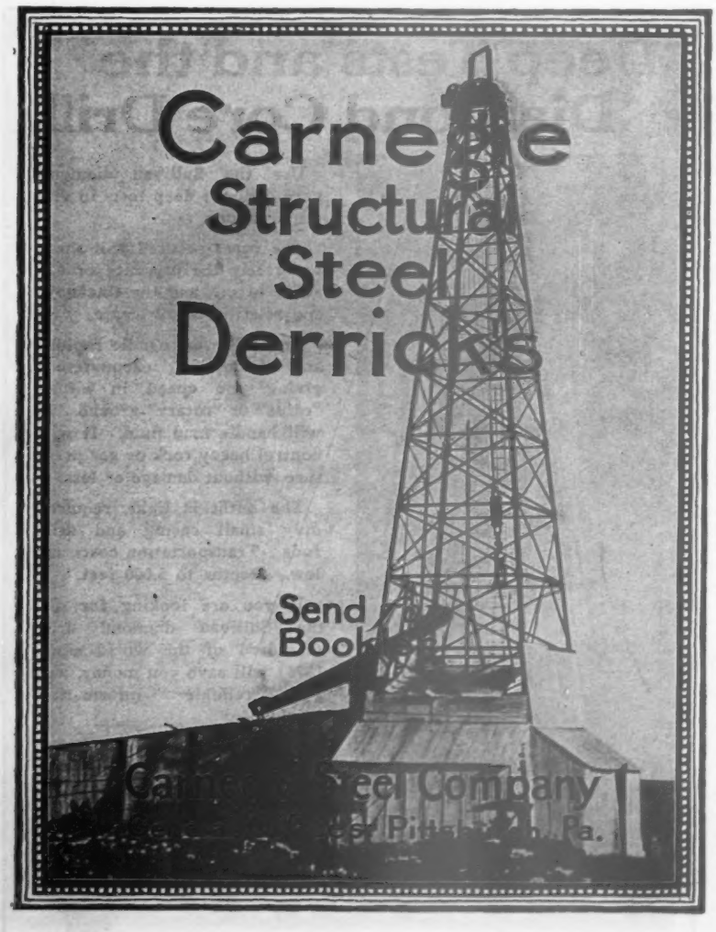

Four Years Earnings Of Large Companies; 1925 Outlook Bright

By N. O. Fanning

NEW YORK, March 21.—During the four years from 1920 to 1923, inclusive, 10 leading oil companies reported aggregate net earnings applicable to dividends on their capital or common stocks of $825,592,426. They paid a total of $398,460,159 in cash dividends, or 48.2 per cent of their net. The 10 companies referred to are the Gulf Oil Corp., Standard Oil Co. of California, Union Oil Co. of California, Standard Oil Co. of Indiana, Standard Oil Co. of New Jersey, Standard Oil Co. of New York, The Texas Co., Pure Oil Co., Sinclair Consolidated Oil Corp. and the Atlantic Refining Co.

The amount of net earnings of the 10 concerns, combined, after all charges and preferred dividends, and dividends paid, with percentage, by years, follows:

	Net Available for Common	Cash Dividends Paid	Pctge. Paid
1923	$159,415,757	$121,016,938	76.1%
1922	208,944,236	103,283,021	49.6
1921	114,613,950	94,009,232	81.7
1920	342,618,483	80,150,968	23.3
Total	$825,592,426	$398,460,159	48.2%

Approximately 41.5 per cent of the aggregate net earnings were reported in the single year 1920, a year which will go down as the most prosperous in the history of the oil business to date. However, dividends paid in that year were only 20.4 per cent of the total paid during the four-year period.

Dividend payments increased each year from 1920 to 1923, the 10 companies paying (in cash) $121,016,938 in 1923, against only $80,150,968 in 1920. The payments for 1923 were the largest in the history for the combined 10 concerns. This was not the case for each individual company.

In 1923 two of the oil companies included in the list reported deficits after preferred dividends; two concerns, not the same ones, also reported deficits before preferred payments in 1921. In 1922 and 1920 all 10 companies reported surpluses available for common dividends.

The record of net earnings and the cash dividend payments on capital or common stocks indicates that while 1920 was the most prosperous year for the companies as a group, subsequent years were more favorable to stockholders who had purchased their shares in 1920 or before that and held them throughout the duration of the period. As already stated, 1923 payments were the largest of any of the four years. In that year 76.1 per cent of aggregate net earnings available for dividends were actually disbursed.

In 1921, one of the worst years of the period, 81.7 per cent of total net earnings were disbursed to stockholders.

The fact that during the four years less than 50 per cent of net earnings were actually paid out in dividends is looked upon as a proof of the conservative financial management of the leading oil companies of the country. In such affairs, executives must look at results over a period of years, instead of calculating payments each year as they go along. As a rule dividend payments are partly based upon the showing in the year preceding the one in which disbursements are actually made. This would partly explain the showing made over the four-year period in the above table.

Looking Ahead

Reports of the 10 oil companies for 1924 are not yet published. It is expected that net earnings will be larger in the aggregate than in 1923. Dividend payments in 1924 were about the same as in 1923, perhaps slightly higher due to increased capitalization outstanding, in some instances.

The outlook for this year, however, is much brighter, indicating that if current oil prices hold, the net earnings will show a considerable increase over those for 1924, and will perhaps exceed those of 1922.

There seems to be a lesson, however, in the relationship between net earnings applicable for dividends and the amount

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actually disbursed as shown in the table. This lesson is that increased dividends usually follow a year or a period in which the dividend payments have comprised a comparatively small percentage of actual earnings—a period in which companies are enabled to add a considerable amount to surplus, to be conserved for dividends later or to be put back into the property.

In 1920, only 23.3 per cent of the record earnings of the 10 companies were actually disbursed. In 1921 disbursements rose to 81.7 per cent of net, in 1922 it was 49.6 per cent and in 1923 it was 76.1 per cent.

At the 1923 rate of dividend payments net earnings would have to equal $600,000,000 in order to make a showing like that of 1920, a showing which would probably justify the hope of payments over the 1923 rate.

Whether such earnings can be reported in 1925 or 1926 remains to be seen. We do know, however, that the volume of business done now is greatly in excess of that of 1920, so that if prices for oil products are as comparatively high, the net earnings can actually exceed those of 1920.

EASTERN PIPE LINE REPORT FOR FEBRUARY

OIL CITY, Pa., March 21.—Receipts of crude petroleum from the wells by the pipe lines of the Eastern division during the month of February amounted to 1,696,963 bbls., which is a daily average of 60,606 bbls. This is a decrease of 64,805 bbls. in the total but an increase of 3,775 bbls. in the daily average compared with January, due to the difference in the number of days in the two months. The daily average is 7,147 bbls. less than the daily average for February, 1924.

The deliveries of crude petroleum during the month of February by the pipe lines of the Eastern division aggregated 4,504,174 bbls., the daily average amounting to 160,863 bbls. This is a decrease of 390,389 bbls. in the total and an increase of 2,974 bbls. in the daily average The daily average shipments were 12,131 bbls. greater than the daily average shiuments for February, 1924.

During February the runs of oil from the Illinois field by the Tide Water Pipe Co. and the Illinois Pipe Line Co. amounted to 636,635 bbls., the daily average being 22,737 bbls. This is a decrease of 58,878 bbls. in the total and an increase of 301 bbls. in the daily average when compared with the January figures. The total runs were 101,144 bbls. greater than they were in February, 1924. Deliveries of oil during February by these two pipe lines were 514,662 bbls., a decrease of 57,643 bbls. compared with January and a gain of 161,049 bbls. compared with the figures for February, 1924. The daily average of the February shipments was 18,380 bbls.

The amount of crude oil held in storage by the pipe lines of the Eastern division at the close of February was 11,192,924 bbls., a decrease of 160,352 bbls. from the figures of the previous month. This is the smallest amount held in storage by these lines since April, 1924. The amount of Pennsylvania oil held in pipe line storage decreased 3,848 bbls.; Lima decreased 20,505 bbls.; Kentucky increased 20,232 bbls.; Mid-Continent decreased 147,908 bbls.; Illinois decreased 8,442 bbls.

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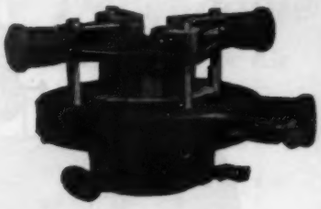
The Northern Oil Co. of Virginia, Minn., has completed a filling station on the roof of its new plant at Duluth. The plant occupies a site on the railroad and back of it is a steep hill on top of which is a boulevard connecting with a bridge over the ravine, through which the tracks pass. The top of the plant was on a level with the boulevard and it is there the filling station operates. The opening day was January 17 and although the temperature averaged from zero to 5 degrees below 7,000 gallons of gasoline were sold to 1,400 cars. The average daily sales since then have run nearly 1,000 gallons.



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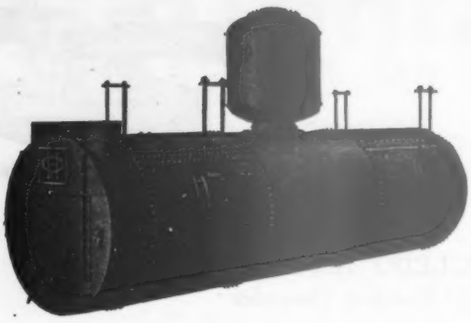

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How Torsion Balance And Seismograph Aid To Find Salt Domes

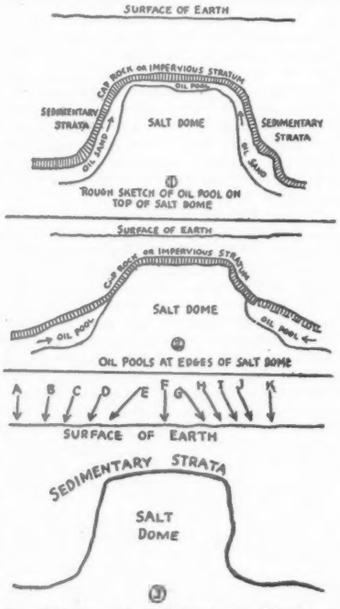
Just how the seismograph and the torsion balance are used to find salt domes which indicate oil deposits was told to the Kiwanis Club of Houston, Tex., by Alexander Deussen, geologist of the Marland Oil & Refining Co., and F. E. Vaughan, geologist for the Roxana Petroleum Corp. and reported by the Houston Chronicle.

Mr. Deussen first explained that, in the Gulf Coastal plain oil was usually found above or around a salt dome, though not necessarily around every salt dome. The salt domes project into the sedimentary strata above them, forced up in ages past by internal pressure, or by strains in the outer shell of the earth as it cooled and shrank.

The oil, being lighter than salt, and even lighter than water, sought the highest level. Where a layer of oil-tight sedimentary stratum or rock rose over the salt dome the oil seeped upward and gathered at the top of the salt dome, which would be the highest point it could reach. Where the overlying stratum (layer of rock or clay) ran into the side of the salt dome and forced an oil-tight joint, the oil collected underneath it around the edge of the salt dome.

Therefore, the surest way to find oil in the Gulf Coastal region was first to find your salt dome, then drill to the top of it. If you hit the salt without finding oil, then you must try to find the edges of the dome and drill around them.

Discovery of the first salt dome—outside the Coastal Plain of Texas and Louisiana they have not been discovered in the Western Hemisphere except on



the Isthmus of Tehuantepec, Mexico—dates to the discovery of the Spindle Top Field in 1900.

Since then, Mr. Deussen said, about 50 salt domes have been found. Up to 1913, the geologists had located 37, working from surface indications, such as gas seepage, so-called paraffin dirt and the topography—the lay of the land—above them.

That about exhausted the supply of salt domes that could be detected from above ground. In 1913 three more were found, in 1915 one more, not in the Gulf Coastal area proper; in 1917 three more; then none until 1922, when one more was found, and 1923 another one.

Use of Seismograph

Two or three years ago the "torsion balance" was introduced into the coastal region from Germany. A year ago this month the first seismograph was used in locating salt domes, Mr. Deussen continued.

The seismograph is, of course, not a

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new instrument. It has been used for many years to record earthquakes. It is rather simple; just a free swinging pendulum on a base that is set firmly into the earth; the swings of the pendulum are recorded by a delicate mechanism on a paper diaphragm. The trembling of the pendulum, registered in wavy lines on the paper shows the direction and intensity of the earth shock. By comparing several seismographs at various points and drawing their direction lines until they cross, scientists are generally able to figure out about where an earth shock originated, even though it be at the bottom of the sea a thousand miles out.

Earth of various kinds, rock of various sorts transmit vibrations with different speed and different degrees of intensity, Mr. Deussen illustrated by telling his audience to imagine the seismograph placed at the end of a steel railroad rail, which is highly elastic and carries vibrations fast and well. Tapping the other end of the rail lightly with a hammer would cause the seismograph to register a sharp shock almost instantly.

If the rail were made of dough instead of steel, the shock would travel through it very slowly and be very feeble, if it reached the seismograph at all.

Salt is highly elastic, like the steel rail. The sedimentary deposits through which the salt has been thrust up, like a mountain rising into the air, are not so elastic; they're more like the dough.

So if an artificial earth shock can be produced and made to travel through the salt dome, the shock will carry much faster and stronger to the seismograph than it would if there were no salt dome present.

About a year ago a portable seismograph was devised that didn't have to have a special foundation or fixed base and so could be taken into the field.

Artificial Quakes

Dynamite, 50 to 300 pounds at a shot, is exploded in the area suspected to contain a salt dome. The seismograph has been set up at a point within 5 or 6 miles of the explosion. The period it takes from the shock to reach the seismograph is carefully timed. Dynamite is exploded all around, according to a careful survey that will cover all the territory being tested. On one line between an explosion and the instrument the shock may come in much faster and harder than over the other lines. The seismograph is moved and experiments made to establish cross-lines, which finally will locate the approximate center of the salt dome.

This method has actually discovered two salt domes near Houston.

Use of the seismograph in Fort Bend County, south of Richmond, has resulted in the wholesale leasing of thousands of acres on both sides of the Brazos River recently. As high as $15 and $20 an acre a year has been paid for leases. None of the companies operating has announced an oil discovery. Mr. Deussen would say nothing about what the seismograph had found.

Torsion Balance Use

Dr. F. E. Vaughan of the Roxana Petroleum Corp. explained the Eotvos torsion balance.

He said the torsion balance was not new, either. It had been used by Henry Cavendish, (1731-1810) the famous English chemist and natural philosopher to measure the gravitational pull of masses.

Newton's law of gravitation showed that everything in the known universe attracted every other object in direct proportion to its mass. The earth exerts strong pull on the moon, which is much smaller, but the moon also exerts considerable pull on the earth, as shown by its effect in attracting millions of tons of water in the oceans sufficiently to cause tides which in some places are 60 feet high.

Every other body in the sidereal universe exerts a pull on the moon, and it must be the combination of those weaker pulls away from the earth that prevents the stronger pull of the earth (which is called gravity) from bringing the moon crashing into the earth's sur-

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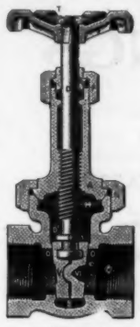

Fig. 375

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face. The same law of gravitational pull holds true of much smaller objects.

We generally think of a plumb line as hanging "straight up and down." But it does not, anywhere on earth. The weight at the end of the plumb line is pulled out of theoretical perfect "plumb"—it does not hang strictly perpendicular to the earth's surface and point straight to the center of the earth, because every object around it, from a mountain range to a skyscraper, and down to a more 150-pound human being standing near it, exerts a gravitational pull that draws it out of line. Even out in the middle of a flat desert, with nothing sticking up for miles around, a plumb line would be slightly out of true plumb, because the mass of the earth is flattened and a bit lop-sided and there would be more pull on the pendulum from the side of the earth that happened to be heavier or denser.

If you can get that you can understand the torsion balance.

Gravitational Pull

It's just a delicate instrument for measuring the gravitational deflection (pulling out of plumb) caused by masses.

Imagine a yard stick, suspended from the middle of a silken thread, so it balances horizontally, and at the same time can move up and down and swing around, twisting the thread. That's why it's called a "torsion" balance, because it twists.

Imagine a lead ball attached to one end of the yard stick. Imagine another lead ball attached to the other end, but on another thread, suspending it about 3 feet below the level of the other ball.

Now make a similar instrument out of metal and attach a measuring device to it that will record the tiniest movements of it and you have the improved form of the torsion balance developed by Prof. Roland Eotvos of Budapest, Hungary, from Cavendish's cruder instrument.

Mr. Deussen had already explained that salt was more elastic than sedimentary rock, clay and dirt than overlies a salt dome. Doctor Vaughan explained that salt rock is lighter than the sedimentary strata that lie around and over it.

Therefore, since the mountain of salt sticking up into the flabbier, but heavier earth, above it is less dense than the rest of the earth near it, it will have less of gravitational pull on any object on the earth's surface above it, including the torsion balance weights.

Now if the torsion balance is at A in figure 3 in the drawings, it is not near enough to the salt dome to be deflected. At B it is beginning to feel the effect of the lighter salt, and is swinging away from it toward the heavier sedimentary mass. At C, D and E the lighter gravity pull of the salt becomes more marked At the center of the dome F, of course, the pull of the heavier sedimentary masses on either side become equal, and the torsion balance swings back to normal. As it is moved out to the other edge, through G. H, I and J, the effect becomes less, until at K it is outside the zone of influence of the salt dome.

Crudely illustrated (the right side of drawing No. 3 does not show enough variation in the slant of the arrows), this is the way the torsion balance is used to locate salt domes.

Subject to Variations

It isn't so simple as that, Doctor Vaughan admitted. Presence of heavy cap rock over the salt dome, which is much heavier than the other earth around the dome, may neutralize the light weight of the salt mountain and cause the torsion balance to "tell a flat lie" that there is no salt dome in the neighborhood Also, he said, the lie of the land around the place where the torsion balance is set up will cause deflections in it; a hill, for instance, would pull it out of plumb; a mass of light substance, not salt or oil, underground, would affect the balance, and a mass of heavy substance, like the cap rock would cause error.

In general, however, the torsion balance, Doctor Vaughan said, will rather accurately determine the presence of a salt dome, and more accurately than any other instrument will trace its outlines.

Knowing where the edges of a salt dome are is important, because, although,

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the oil may be gathered on top of the dome when the cap rock or impervious stratum over the oil sand runs as it does in figure 1, on the other hand, especially if the salt dome top comes up close to the earth's surface, the cap rock or oil-tight stratum may be pinched off against the side of the salt dome as in figure 2, and the oil will then be collected up under the angle where they join, which is as high as it can seep.

Therefore, if no oil is found on top of a salt dome, the place to look for it next is around the edges. That is where the torsion balance comes in.

The torsion balance was first used to seek indications in Germany during the war, when the Germans needed oil badly. Professor Eotos had perfected it 30 years ago, but used it only in laboratory experiments in the interests of pure science. A Potsdam professor adapted it to field use for oil exploration.

After the war, several of his models were sold in the United States. Then the Royal Dutch-Shell Co. discovered them. That company tried to buy up all of them, but there were several in the United States and some in the possession of the Berlin-Charlottenburg Exploration Co. that it could not buy.

There are two torsion balances owned by companies operating around Houston; the other companies that use them depend upon the Berlin-Charlottenburg Exploration Co. for the work.

So far, Doctor Deussen said, no discovery of an oil field made with the aid of the torsion balance had been made public, but he indicated that the instrument had not proved a failure.

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Classified Wants
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PITHOLE PIONEER DIES

CHICORA, Pa., March 21.—George P. Tadder, aged 80 years, an oil man who was known from Pithole to California, died recently at his home here.

Originally Mr. Tadder was an oil producer and became first famous as being one of the Tadder brothers at Pithole. He drilled the first well on the Balliard farm known now as the Chris Dale farm, between Oil City and Plumer. In 1873 when the oil industry was attracting attention in Pennsylvania, and particularly in Butler County, he located at Pithole, Venango County, and later in Greece City, Butler County, where he established an oil well casing business. At the same time he conducted a similar business at Troutman, another of the booming oil centers of that day. In 1882 Mr. Tadder located at Millerstown, now Chicora, where he established himself in the same line of business. He was the inventor of a number of appliances used throughout the oil fields in the casing industry and had them patented. Until recently he had continued his casing business in partnership with his sons.

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The Cosden sales organization is announcing a new department for the shipping of lubricating oils in drums in car lots or less than car lots from the Tulsa refinery. Customers' drums will be refilled without extra charge if the drums are received clean and freight prepaid. The oils are made from strictly filtered stock and comprise a complete line of motor, tractor and industrial oils including many specialties.

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Oklahoma-Kansas and Eastern Pipe Line Report

OKLAHOMA-KANSAS PIPE LINE REPORT FOR JANUARY

Runs

Company—	Month	Dy. Av.
*Prairie Pipe Line Co.	3,255,000	105,000
Gulf Pipe Line Co.	1,265,555	40,824
Texas P. L. Co. of Okla.	417,720	13,475
Magnolia Petroleum Co.,	1,147,078	37,002
Empire Pipe Line Co.	936,200	30,200
Coeden Pipe Line Co.	382,025	18,452
Sinclair Pipe Line Co.	1,255,500	40,500
*Other lines	8,680,000	280,000
Total January	17,839,078	575,454
Total December	18,199,099	587,067
Difference	360,021	11,613

Shipments

†Prairie Pipe Line Co.	4,441,290	143,267
Gulf Pipe Line Co.	1,092,134	35,230
Texas P. L. Co. of Okla.	562,468	18,144
Magnolia Petroleum Co.	1,477,727	47,669
Empire Pipe Line Co.	906,130	29,230
Coeden Pipe Line Co.	884,117	28,520
†Sinclair Pipe Line Co.	2,592,815	83,639
*Other lines	8,990,000	290,000
Total January	20,946,691	675,699
Total December	21,471,050	692,615
Difference	524,359	16,916

Stocks

*Prairie Oil & Gas Co.	26,200,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line Co. and Gypsy Oil Co.	10,008,667
The Texas Co.	5,008,985
Magnolia Petroleum Co.	9,041,472
Empire Pipe Line Co.	2,828,986
Coeden Pipe Line Co.	2,656,928
*Sinclair Crude Oil Purchasing Co.	27,800,000
Carter Oil Co.	16,763,946
*Other lines	16,400,000
Total January	112,728,984
Total December	114,467,198
Difference	1,738,214

*Estimated. †Prairie shipments include Texas crude. Sinclair shipments include Texas and Wyoming oil.

Note—Stocks do not include approximately 9,000,000 bbls. of crude oil held in storage on private tank farms and leases.

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for January and February:

	Jan., '25	Feb., '25
Nat. Transit	158,224.95	152,089.01
S. W. Pa. P. L.	75,022.06	76,044.66
Eureka P. L.	336,785.07	323,694.15
Buckeye P. L. (Macksburg)	270,937.24	257,192.02
Buckeye P. L. (Cleveland)	11,783.31	11,467.59
Buckeye P. L. (Lima, etc.)	119,433.03	121,210.85
Indiana P. L.	9,562.51	10,117.61
Cumberland P. L.	316,512.23	290,368.13
N. Y. Transit	17,233.29	18,156.30
Tidewater P. L.	125,723.35	123,151.77
Pure Oil	184,170.99	169,180.29
Emery P. L.	43,635.37	41,770.44
Indian Ref.	50,678.03	57,797.15
Paragon Dev.	34,626.09	29,522.74
Pittsburgh P. L.	6,841.87	7,359.37
Riggs Ref.		8,851.29
Total	1,761,768.28	1,696,963.26
Daily average	56,831.23	60,605.83

Note—Indian Refining Co. also reported other receipts of 275,260.75 bbls. Paragon Refining Co. had other receipts of 91,522.60 bbls. Paragon Development Co. had other receipts of 3,890.47 bbls. Pittsburgh Pipe Line had other receipts of 521.35 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for January and February:

	Jan., '25	Feb., '25
Nat. Transit	430,479.78	426,389.57
S. W. Pa. P. L.	362,482.73	333,592.35
Eureka P. L.	104,202.98	120,288.49
Buckeye P. L. (Macksburg)	108,833.21	95,657.49
Buckeye P. L. (Cleveland)	971.46	1,212.97
Buckeye P. L. (Lima, etc.)	737,449.65	754,903.48
Indian P. L.	1,184,796.12	1,068,325.14
Cumberland P. L.	151,651.28	142,109.90
N. Y. Transit	833,143.35	700,076.33
Northern P. L.	127,033.43	118,854.01
Tidewater P. L.	123,127.50	99,605.73
Pure Oil	184,953.81	124,856.01
Emery P. L.	42,468.57	38,829.91
Paragon Ref.	86,990.07	99,542.91
Indian Ref.	396,228.19	334,417.14
Paragon Dev.	19,862.92	37,650.36
Pittsburgh P. L.	9,893.25	7,261.61
Total	4,894,563.29	4,504,173.81
Daily average	157,889.13	160,863.35

Indian Refining Co. had other deliveries of 3,651.28 bbls.

Gross Stocks

The gross stocks held by various pipe lines in the oil producing section of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky at the close of January and February were as follows:

	Jan., '25	Feb., '25
Nat. Transit	997,527.01	1,035,423.87
S. W. Pa. P. L.	671,832.11	686,629.94
Eureka P. L.	1,703,887.62	1,640,003.77
Buckeye P. L. (Macksburg)	327,735.43	269,748.41
Buckeye P. L. (Cleveland)	577,659.69	43,206.35
Buckeye P. L. (Lima)	3,556,916.92	3,491,690.20
Indiana P. L.	617,271.50	627,221.38
Cumberland P. L.	727,024.27	607,314.58
South P. L.	505,691.07	421,908.22
Crescent P. L.	58,217.64	58,244.28
N. Y. Transit	718,589.21	684,490.18
North P. L.	989,912.28	1,022,529.08
Pure Oil	407,274.06	454,163.71
Emery P. L.	8,880.37	11,400.75
Paragon Ref.	12,815.50	34,625.73
Indian Ref.	64,092.91	76,538.14
Paragon Dev.	13,161.62	8,591.88
Pittsburgh P. L.	4,506.45	5,210.04
Riggs Ref.		5,683.39
Total	11,353,275.66	11,192,923.90
Decrease	230,403.86	160,351.76

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of January and February showing the gross stocks of the above fields:

	Jan., '25	Feb., '25
Penna.	3,892,776.91	3,888,928.59
Lima	1,289,019.05	1,268,514.45
Kentucky	1,421,861.94	1,442,094.26
Mid-Cont.	4,711,600.48	4,563,791.51
Illinois	38,017.28	29,595.09
Total	11,353,275.66	11,192,923.90

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1922	1923	1924	1925
January	67,702	75,790	62,638	56,831
February	75,096	71,092	68,023	60,606
March	78,531	76,592	68,721	.....
April	75,462	76,614	71,058	.....
May	77,592	77,365	63,942	.....
June	76,193	77,593	63,230	.....
July	76,435	71,879	64,208	.....
August	79,387	76,910	59,942	.....
September	78,512	72,358	62,930	.....
October	77,209	76,256	64,976	.....
November	75,313	70,762	56,282	.....
December	73,351	69,271	55,814	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1922	1923	1924	1925
January	119,792	171,067	145,518	167,889
February	111,362	164,219	148,732	160,863
March	127,753	185,487	147,098	.....
April	127,068	170,751	147,611	.....
May	127,840	177,102	134,997	.....
June	137,638	173,598	143,010	.....
July	137,872	168,330	124,187	.....
August	153,275	142,766	123,120	.....
September	158,761	137,266	127,325	.....
October	165,345	134,597	123,170	.....
November	165,677	131,426	124,400	.....
December	172,861	139,909	151,392	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1923	1924	1925
January	14,040,567	12,907,202	11,353,276
February	14,028,437	11,844,068	11,192,924
March	13,873,146	10,906,752	.....
April	13,737,676	10,922,742	.....
May	13,815,622	11,335,309	.....
June	14,541,253	11,544,304	.....
July	14,645,584	12,062,361	.....
August	14,770,539	12,221,676	.....
September	14,803,444	12,206,836	.....
October	14,504,111	12,664,061	.....
November	14,157,726	12,268,530	.....
December	13,444,361	11,583,680	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

1924—	Receipts	Shipments	Stocks
February	2,151.78	1,926.55	10,073.81
March	3,398.78	1,716.28	11,756.31
April	3,311.84	2,066.78	13,001.37
May	3,036.50	5,338.21	10,699.31
June	3,188.51	407.01	13,481.11
July	3,067.74	3,334.29	13,214.56
August	2,901.36	6.21	16,109.71
September	2,794.58	5,775.89	13,128.40
October	3,342.40	1,880.50	14,590.31
November	2,700.13	482.89	12,427.56
December	3,120.34	2,659.13	12,888.77
1925—			
January	1,730.86	1,681.15	12,938.48
February	2,702.05	4,564.70	11,075.83

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks, March 1	2,369,152.97
Runs from wells	610,552.50
Other receipts	171,552.74
Regular deliveries	438,535.56
Other deliveries	306,581.20

The amount of Illinois oil run by the Tide Water Pipe Line Co. in February was 26,052.40 bbls. and deliveries were 26,025.66. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries from the Illinois Field as follows:

1924—	Runs.	Deliveries
February	535,490.70	353,613.14
March	611,289.36	369,542.51
April	514,356.43	339,546.10
May	751,080.44	510,414.42
June	725,060.87	528,403.38
July	759,646.84	553,356.50
August	720,467.72	515,235.71
September	714,675.36	536,752.80
October	741,767.42	543,863.77
November	650,147.63	521,459.21
December	640,919.23	595,942.26
1925—		
January	695,513.42	572,304.77
February	636,635.20	514,661.53

The Tide Water Pipe Co., Ltd., also delivered in February 236,246.74 bbls. of Oklahoma oil. The total deliveries of all grades by the Tidewater were 421,878.13 bbls.

AVERAGE WEEKLY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Average bbls. per week—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
October	85,379	49,000	391,069	85,602	36,127	784,056	.....	.....	.....	.....	.....	784,056
November	119,469	52,031	527,948	38,031	37,321	697,981	.....	.....	.....	.....	.....	697,981
December	57,127	16,709	386,806	81,067	19,291	561,540	.....	21,000	.....	.....	21,000	582,540
January	86,933	14,030	310,933	75,418	58,709	548,023	.....	.....	.....	.....	.....	548,023

AVERAGE WEEKLY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per week—	ATLANTIC PORTS: Baltimore	Boston	New York	Philadelphia	Others	Total	GULF COAST PORTS: Galveston	New Orleans Baton Rouge	Port Arthur Sabine Pass	Tampa	Total	Total All Ports
October	136,826	67,515	257,418	90,818	113,127	665,704	231,903	268,816	111,097	29,351	640,967	1,306,671
November	198,569	87,500	477,631	166,410	258,531	1,187,641	332,831	380,569	94,269	19,831	827,500	2,015,141
December	165,515	25,515	269,164	83,418	246,582	689,194	220,388	358,806	76,321	51,499	707,014	1,396,208
January	129,843	113,582	440,776	60,739	191,709	936,649	205,051	398,097	100,331	28,281	731,710	1,668,359

GROSS PRODUCTION IN THE UNITED STATES FOR 12 MONTHS

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountain	Eastern Fields	Total
February:	Month	19,341,336	12,236,427	10,238,052	2,211,863	3,302,750	1,604,450	3,996,251	2,984,000	55,716,619
	Daily average	666,939	421,953	353,036	72,857	113,887	51,877	137,791	102,896	1,921,236
March:	Month	19,913,262	13,336,851	12,044,503	2,206,426	3,882,695	1,701,593	3,827,204	3,250,600	61,163,134
	Daily average	642,363	430,221	388,532	71,175	125,247	54,890	123,460	104,858	1,973,064
April	Month	19,298,849	13,452,240	11,577,246	2,268,540	4,068,225	1,495,582	3,738,533	3,273,600	58,173,614
	Daily average	643,328	448,408	385,908	75,618	135,608	49,853	124,611	109,120	1,938,121
May.	Month	19,833,576	14,247,697	11,623,395	2,459,765	4,659,117	1,596,701	3,866,010	3,264,000	61,550,261
	Daily average	639,793	459,603	374,948	79,347	150,285	51,507	124,710	105,042	1,985,499
June:	Month	18,807,999	14,447,390	11,602,350	2,469,380	4,756,443	1,812,580	3,636,634	3,253,600	60,785,366
	Daily average	626,933	481,580	386,745	82,313	158,548	60,429	121,288	108,453	2,026,179
July:	Month	19,274,755	15,191,860	11,917,137	2,671,052	4,597,969	1,815,966	3,768,398	3,371,600	62,607,738
	Daily average	621,766	490,060	384,424	86,195	148,322	58,580	121,561	108,761	2,019,637
August:	Month	19,112,998	16,525,356	11,808,876	2,717,398	4,359,241	1,702,525	3,749,375	3,288,000	63,261,769
	Daily average	616,548	533,076	380,931	87,658	140,621	54,920	120,948	106,000	2,040,709
September:	Month	18,308,233	16,299,030	11,089,492	2,638,900	4,029,536	1,795,575	3,330,007	3,150,000	60,640,773
	Daily average	610,274	543,301	369,650	87,963	134,318	59,853	111,000	101,936	2,021,359
October:	Month	18,696,559	16,189,898	10,942,005	2,768,455	3,983,696	1,774,707	3,058,368	3,395,000	60,808,688
	Daily average	603,115	522,255	353,000	89,305	128,506	57,249	98,654	109,516	1,961,597
November:	Month	17,767,064	15,955,620	10,731,264	2,597,460	3,461,050	1,965,921	2,788,110	2,941,000	58,207,489
	Daily average	592,234	531,854	357,709	86,582	115,035	65,531	92,937	98,033	1,940,256
December:	Month	18,795,126	16,081,188	11,264,915	2,537,443	3,380,511	1,870,876	3,302,888	3,000,850	59,183,796
	Daily average	606,294	517,135	363,384	81,853	109,049	60,351	74,287	96,402	1,909,165
January:	Month	18,743,288	15,462,800	13,790,195	2,520,855	3,278,484	1,774,072	2,637,676	3,065,993	61,263,363
	Daily average	604,623	498,800	444,845	81,318	105,758	57,228	84,760	98,903	1,976,333
	Total 12 months	227,893,905	179,376,364	138,629,430	29,968,531	47,759,716	20,810,548	40,691,153	38,236,243	723,366,890
	Daily average	622,660	490,099	378,769	81,881	130,491	56,859	111,178	104,471	1,976,609

Acme F
Acme P
Adler, J
Ajax Ir
Ajax R
America
America
America
America
America
America
America
America
America
Ames Sh
Anderso
Anderso
Andrews
Arbon, I
Armstro
Athey T
Atlas B
Austin
Axelson

Baash-R
Baker C
Barber-C
Barnes
Barnick
Barnsda
Bartlesv
Bell Pu
Besseme
Bignall
Biggs B
Black, S
Blaw-Kn
Borden
Botfield
Bovaird
Bovaird
Braden
Bradfor
Bridgep
Bristol
Broderi
Brokaw
Brown
Brown
Buckeye
Burns
Buff &
Burt M
Busch-S
Butler

Capital
Carbond
Carnegi
Casey-B
Caudill,
Central
Chain B
Champi
Chaplin
Chapma
Chestnu
Chicago
Chicago
Clapp,
Clark B
Clark, I
Classifie
Climax
Columbi
Columbi
Columbu
Compan
Contine
Contine
Cooper,
Cox & S
Crane C
Cyclone

D. & B
Darling
Dart, E
Davis B
Dawson
Dayton
Dearbor
De Le V
Delta E
Dickey-
Dixon,
Donovan
Dorn, E

The ADVERTISERS' INDEX

A

Acme Fishing Tool Co.
Acme Petroleum Co.
Adler, Joseph L.
Ajax Iron Works
Ajax Rope Co., Inc.
American Appraisal Co.
American Cable Co.
American Car & Foundry Co.
American Cast Iron Pipe Co.
American Dyewood Co.
American Radiator Co.
American Schaeffer-Budenburg Corp.. 82
American Sheet & Tin Plate Co.
American Telephone & Telegraph Co.
Ames Shovel & Tool Co. 121
Anderson, Carl B. 134
Anderson & Anderson 135
Andrews Steel Co. 101
Arbon, Paul & Co. 59
Armstrong Bros. Tool Co. 130
Athey Truss Wheel Co. 45
Atlas Ball Co. 80
Austin Co.
Axelson Machine Co.

B

Baash-Ross Tool Co.
Baker Casing Shoe Co. 131
Barber-Greene Co. 91
Barnes Manufacturing Co. 98
Barnickel, Wm. S. & Co. 128
Barnsdall Refining Co.
Bartlesville Supply Co. 101
Bell Pump Co.
Bessemer Gas Engine Co. 12
Bignall & Keeler Machine Works ... 90
Biggs Boiler Works Co.
Black, Sivalls & Bryson, Inc. 14
Blaw-Knox Co. 7
Borden Co.
Botfield Refractories Co. 122
Bovaird & Seyfang Manufacturing Co.
Bovaird Supply Co., The
Braden Co., The
Bradford Motor Works
Bridgeport Machine Co. ...Back Cover
Bristol Co. 124
Broderick & Bascom Rope Co.
Brokaw, Dixon, Garner & McKee ...135
Brown Instrument Co. 100
Brown & Thomsen 134
Buckeye Traction Ditcher Co.
Burns Tool Co.
Buff & Buff Manufacturing Co. 135
Burt Manufacturing Co. 124
Busch-Sulzer Bros. Diesel Engine Co..
Butler Manufacturing Co.

C

Capital Abstract & Realty Co. 131
Carbondale Machine Co.
Carnegie Steel Co. 125
Casey-Hedges Co. 132
Caudill, Samuel J. 134
Central Steel Co.
Chain Belt Co.
Champion Machine & Forging Co. ...107
Chaplin-Fulton Manufacturing Co. ..132
Chapman Valve Manufacturing Co. ..
Chestnut & Smith Corp. 57
Chicago Bridge & Iron Works
Chicago Pneumatic Tool Co. 9
Clapp, Frederick G. 134
Clark Brothers Co.
Clark, Robert W. 134
Classified Wants 102-103-104
Climax Engineering Co. 97
Columbian Rope Co.
Columbian Steel Tank Co.
Columbus Sucker Rod Co.
Compania Cartografica Venezolana ..132
Continental Motors Corp. 55
Continental Supply Co. 79
Cooper, C. & G. Co. 36-37
Cox & Sons Co., The 122
Crane Co. 16
Cyclone Fence Co.

D

D. & B. Pump & Supply Co.
Darling Valve & Manufacturing Co.. 13
Dart, E. M. Manufacturing Co.
Davis Regulator Co. 78
Dawson Towel Supply Co. 131
Dayton Pipe Coupling Co.
Dearborn Chemical Co.
De Le Vergne Machine Co.
Delta Electric Co. 126
Dickey-Ashby Fountain Co. 131
Dixon, Joseph, Crucible Co. 131
Donovan Boiler Works, Inc.
Dorn, R. J., Co., Inc.
Dresser, S. R. Manufacturing Co. ... 29
Duff Manufacturing Co.
Dunn Manufacturing Co 81

E

Eagle Picher Lead Co.
Eastern Torpedo Co. 128
Edward Valve & Manufacturing Co. .129
Empire Refineries, Inc.
Equitable Meter Co.

F

Fairbanks-Morse & Co.
Fenwick-Reddaway Mfg. Co.
Fisher Governor Co. 120
Fleming, Martin Undertaking Co. ...132
Flexible Steel Lacing Co.
Foamite-Childs Corp
Foggan, Geo. N.
Fohs, F. Julius 133
Foos Gas Engine Co.
Fort Worth Laboratories 132
Foster & Reiter 133
Foxboro Co., Inc., The 90
Franklin Valveless Engine Co.
Frick-Reid Supply Co. 53
Fulton Iron Works

G

Gantz Tank Co.
Gardner Governor Co. 95
Garlock Packing Co. 72
Gaso Pump & Burner Mfg. Co.
.... Inside Back Cover
General American Tank Car Corp. ..
General Motors Truck Co. 73
Gomory, W. L. 133
Goodrich, B. F. Rubber Co., Inc.
Goodrich, H. B. 135
Goodyear Tire & Rubber Co
Gould Burner Co.
Goulds Manufacturing Co.
Gott, H. P. Manufacturing Co. 132
Graver Corp. ....Front Cover
Greenhalgh, J. H. & Co.
Greene, Frank C. 133
Griscom-Russell Co. 33
Guiberson Corp. 8
Gurley, W. & L. E.

H

Halliburton, Erle P. 77
Harrisburg Pipe & Pipe Bending Co.. 2
Havana Manufacturing Co. 131
Hazard Manufacturing Co.
Henry, George W. 131
Herald Brothers 135
Heydrick Mapping Co. 132
Hills-McCanna Co.
Hinderliter Tool Co.
Homestead Valve Co.
Hood, H. H. 135
Hooven & Allison Co. 88
Hope Engineering & Supply Co. 84
Hopkins, Edwin B. 133
Hough, Charles N., Mfg. Co. 123
Hughes, J. K. Development Co. 135
Hughes Tool Co. 63
Hunt, Robert W. Co. 135
Huntley & Huntley 134

I

Illinois Glass Co.
Imperial Belting Co. 100
Imperial Brass Mfg. Co.
Ingersoll-Rand Co. 76
International Derrick & Equipment Co. .... Inside Front Cover
International Harvester Co. of America
International Motor Co.
International Nickel Co.
Iron-King Manufacturing Co. 92

J

Jarecki Manufacturing Co.
Johns-Manville, Inc.
Jones, S. M. Co. 133

K

Kansas City Bolt & Nut Co.
Kansas City Hay Press Co. 123
Kaw Boiler Works Co.
Kellogg, M. W. Co. 99
Kelly & Jones Co. 134
Kelly-Springfield Tire Co.
Kennedy Valve Manufacturing Co. ..
Kerr, John B. 133
Kesselman & Co.
Keuffel & Esser Co.
Kewanee Boiler Co.
Kinney Manufacturing Co.
Kirk, Charles T. 134

L

Lafe Speer Abstract Co. 131
Landis Machine Co. 3
Larkin & Co. 123
Larkin Packer Co. 127
Layne & Bowler Co.
Lebus Rotary Tool Works
Liedecker Tool Co. 83
Lewis, James O. 135
Linde Air Products Co. 1
Link-Belt Co.
Longhart Supply Co.
Longyear, E. J. Co. 127-133
Lucey Manufacturing Corp. 71
Ludlow Valve Manufacturing Co.
Lufkin Foundry & Machine Co.
Lufkin Rule Co.
Lugar, Jos. & Co. 132
Lunkenheimer Co.

M

Magnolia Petroleum Co.
Maloney Tank Manufacturing Co. .. 56
Manzel Brothers Co.
Marion Machine Foundry & Supply Co. 40-41
Marsh Gauge Pole Co. 133
Matson, George C. 135
Matteson, W. G. 133
Meriam Co. 134
Messimer, H. H. 134
Metric Metal Works 61
Miller Improved Gas Engine Co.
Miller, Max B. & Co., Inc.
Monarch Cement Co. 58
Moon Mannufacturing Co.
Moore, Lee C. & Co., Inc. 6
Munn & Co. 132
Myers, F. E., Bro. & Co. 127

Mc

McCord Radiator Manufacturing Co..
McDonald, A. Y. Manufacturing Co.
McGraro-Hill Book Co., Inc. 125
McGregor Working Barrel Co.
McIntosh & Seymour Corp.
McNutt, V. H. 133

N

National Carbon Co., Inc. 1
National Lead Co.
National Supply Co. 49
National Transit Pump & Machine Co. 86
National Turnbuckle Derrick Co.
National Tube Co. 4
Newton Process Co. 25
Norris Brothers 124
North American Car Co.
Northern Oil Information Bureau..132
Northrup Equipment Co.
Novo Engine Co. 85
Nugent Steel Casting Co. 134
Nye Tool & Machine Works 105

O

O'Brien Steel Construction Co. 128
Ohio Steel Foundry Co.
Oil Conservation Engineering Co.
Oil Well Improvements Co.
Oil Well Supply Co. 68-69
Okmulgee Boiler & Welding Works ..
Oster Manufacturing Co.
Oxweld Acetylene Co. 1

P

Page Fence & Wire Products Association
Parkersburg Machine Co.
Parkersburg Rig & Reel Co.
Patrick, R. S. 129
Pattin Brothers Co.
Pennzoil Co., The
Petroleum Iron Works
Pforzheimer, Carl H., & Co.
Pioneer Tank & Boiler Co.
Pittsburgh-Des Moines Steel Co.
Pittsburgh Meter Co. 128
Pittsburgh Reinforced Brazing & Machine Co.
Plibrico Jointless Firebrick Co.
Powell, William Co.
Power Manufacturing Co. 11
Power Piping Co. 120
Power Specialty Co.
Prescott Co., The
Prest-O-Lite Co., Inc. 1
Producers & Refiners Corp.
Pure Oil Co. 67
Pyle-National Co.

R

Reading Iron Co. 47
Reading Steel Castings Co., Inc. 15
Reed Roller Bit Co. 74-75
Regan Forge & Engineering Co.
Reid, Joseph Gas Engine Co. 66
Republic Iron & Steel Co. 94
Republic Supply Co.
Rich, John L. 134
Ring, DeWitt T. 135
Riter-Conley Co. 135
Robinson, Heath M. 135
Robinson Packer Co.
Rock Island Plow Co.
Roots, P. H. & F. M. Co.
Ross-Meehan Foundries
Ryerson, Joseph T. & Son. 133

S

Sand Springs Water Co. 131
Schley, Jack A. 132
Shippers' Car Line Co.
Sinclair Refining Co. 115
Sivyer Steel Casting Co.
Slater Bros. Turnbuckle Derrick Co.
Smith, George H., Steel Casting Co..
Smith-Separator Co. 43
South Chester Tube Co.
Southern Cornice Works
Spang & Co.
Spellman, John M. 135
Spence Machine Co. 120
Spengler Core Drilling Co. 105
St. Louis Steel Casting Co. 135
Stalder, Walter 133
Standard Engineering Co. 121
Standard Seamless Tube Co.
Standard Torpedo Co. 133
Stanley Belting Corp. 129
Sterling Steel Co.
Sterling Diamond & Watch Co. 119
Stewart, Irvine E. 135
Sullivan Machinery Co.
Superior Tube Co.
Swanson Oil Corp. 89
Swartwout Co., The

T

Tagliabue, C. J. Manufacturing Co..
Taylor Instrument Co.
Taylor-Wharton Iron & Steel Co.
Templeton, Kenly & Co., Ltd.
Texas City Terminal Railway Co.
Texas Co., The
Texas Gulf Sulphur Co. 130
Tide Water Oil Co. 110
Titusville Forge Co.
Titusville Iron Works
Toledo Pipe Threading Machine Co.. 98
Trimont Manufacturing Co. 120
Trumble Gas Trap Co. 93
Truscon Steel Co.
Tulsa Boiler & Machinery Co. 130
Tulsa Ice Co. 131

U

United Iron Works
United States Cast Iron Pipe & Foundry Co. 131
U. S. Tool Co.
Universal Oil Products Co. 87

V

Vogt Brothers Manufacturing Co. ...134
Vogt, Henry, Machine Co.

W

Wall Rope Works, Inc.
Walworth Manufacturing Co. 5
Washburne, C. W. 133
Waukesha Motor Co. 126
Wertzberger Derrick Co.
Westcott & Greis
Westcott Valve Co.
Western Bunk Supply Co. 131
Western Machinery Co.
Westinghouse Electric & Mfg. Co..
Wickwire Spencer Steel Co., Inc. 51
Wico Electric Co.
Williams, J. H. & Co. 135
Wilson & Snyder
Wilson Oil Tool Corp. 65
Wilson Welder & Metals Co.
Wirth, Alfred & Co.
Wood & Wood 134
Worthington Pump & Machinery Corp.
Wright, Harry F. 133
Wright Manufacturing Co.

Y

Yale & Towne Manufacturing Co. .. 70

Z

Zero Hour Torpedo Co. 96